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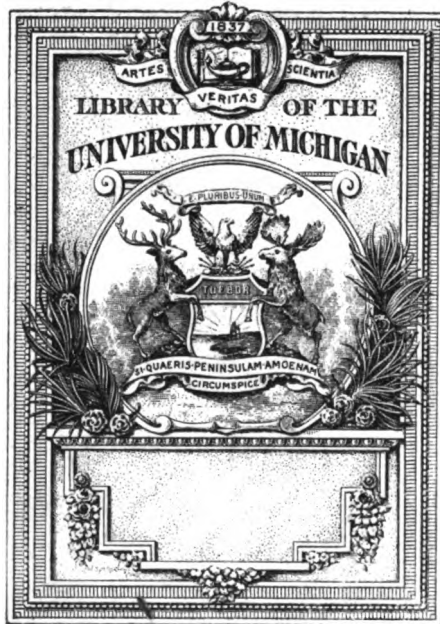
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THE
NEW YORK JOURNAL OF
GYNÆCOLOGY AND OBSTETRICS.

EDITED BY

A. H. BUCKMASTER, M. D. AND J. D. EMMET, M. D.

VOL. III.

JANUARY, 1893, TO JANUARY, 1894.

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THE NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS.

SPECIALISM IN MEDICINE PARTICULARLY AS RELATED TO SURGERY AND GYNÆCOLOGY.¹

BY WILLIAM WARREN POTTER, M. D.

Buffalo, N. Y.

THE subject of specialism and specialists has often before been presented to medical societies and other organizations, but as a rule not by specialists nor before special societies. The general practitioner, manifesting concern with regard to his hold upon his clientèle, has frequently resorted either to society papers or magazine articles for the purpose of attacking specialism or defending generalism—one or the other, or both. It must be admitted that in the consideration of this question, like most other questions, there are presented two sides to many of its prominent features. It is my purpose in seeking the ear of this Association, which is composed of specialists both in surgery and gynæcology that are second to none in their respective departments of medicine, to discuss the subject with deference to all interests involved.

It is probable that specialties in medicine have been practised from a very early day, but you will hardly expect me to consume valuable time in searching ancient history, for the purpose either of displaying a knowledge of medical classics or ministering to a taste for the curious in literature. Time is too fleeting, duties are too pressing, and life is too busy with affairs of the present to tolerate questions other than practical in meetings like this. It seems to me that the time has

¹Read at the fifth annual meeting of the Southern Surgical and Gynæcological Association in Louisville, Ky., November 16, 1892.

passed when we may with propriety discuss the need of specialism and of specialists, because it must be admitted on all sides that they have grown to be a necessity; hence it would be difficult or impossible to return to the old way, even if we would. It cannot be expected in the very nature of things, and under the manifold conditions that are governing the present, not only with regard to medicine but also the collateral sciences, that any one man in his study, observation, or practice can cover the whole professional field in any department. If this is admitted, then a remedy must be sought whereby the people—whose servants we are—may have relief from the dilemma in which they find themselves. That remedy is manifestly offered in the division of duty, study, and practice, whereby the sick and suffering may obtain the benefits of all that is known to science as it advances from day to day.

Conceding then, without further argument, the propriety of the division of the practice of medicine into specialities, the next question impressed upon us is how can this best be done to promote in the highest degree the interests of the people, and at the same time conserve the not less important interests of the profession itself. In championing the interests of the people, as it always ought to be the pleasure of every one to do whenever voice and pen seem called in requisition, we must not lose sight of the fact that their best interests are served when we, as a profession, at the same time look well to our own individual and collective interests. Of what good is it to undertake to promote the general interest if in doing so we trample on the particular interests? Is not the general interest made up of the particular interests? If the particular interests are injured, does not the general interest suffer? Then let us accept the proposition at the outset that in laboring to promote and maintain the highest interests of the profession of medicine, we at the same time bring the best guarantee to the people of an enlightened conservation of public as well as individual health and strength.

The Tutelage of the Specialist.—Having conceded the necessity of a division of labor within the lines of the field of medicine, the next prominent feature connected with the subject of specialism is the proper method of preparation for its practice. It has been my observation, and I presume most of you have noted the same, that here and there often spring up men who claim to be specialists, who either have had no preliminary preparation for the work, or else have gone out of the medical schools and walked immediately into the line of special practice without any experience as general practitioners. Either of these roads to specialism is open to con-

demnation. A man who offers himself to the community as a special practitioner should undergo a careful preliminary training in a medical school that is amply equipped to teach him everything known connected with anatomy, physiology, chemistry, obstetrics, surgery, medicine, hygiene, pathology, microscopy, bacteriology, and all laboratory work necessary to amply and considerately impart to him proper knowledge for the practice of medicine and surgery in any and every branch.

Having grounded himself well in the foundation principles of medicine, he may then after his graduation very properly enter a hospital for a service of two years; and I pause here to remark that I do not believe this service should be performed in a special hospital, but in a general hospital, one that receives all classes of patients; for the young aspirant then especially needs the clinical experience that the wards of such a hospital afford. After his hospital service the next step should be to associate himself if possible with a general practitioner either in town or country; or if not, then he should start out for himself in the general practice of medicine. If he is compelled to do the latter, in my opinion the country affords the best opportunity in which to obtain his first experience. He can easily spend five or eight years in this manner to great advantage, after which he may with propriety enter a post-graduate school for a reasonable term, and then with further propriety spend six months or a year abroad. A visit to Europe at this time is recommended not so much for absolute study as for observation, but careful notes should be made of everything seen, and the record preserved for future reference. Thus, by a somewhat circuitous route we have finally arrived at a point, ten years after graduation and fourteen years after beginning the study of medicine, which will, other things being equal, find most men prepared as adequately as possible for the practice of a chosen specialty.

During the two years spent in hospitals, the six years in private practice, one year in post-graduate study, and another year abroad, a man will most likely have come by the law of natural selection to make an intelligent choice of a specialty, and in this as in most other occupations a man should pursue that which appeals to his intelligence, aptitude, and preference. It need hardly be affirmed that a man does a thing better when he does it willingly and because he likes to do it.

A man practises a specialty—and be it understood I am now speaking of specialties in general and of no one in particular—better by reason

of having the equipment that a large experience in general practice gives him. The constant danger in specialism, to borrow an illustration, is, that a man in examining his patient will discover a pimple in the ear, and, limiting his observation to the area of his otoscope, will fail to discover that there is a pimple on the nose also; in other words, he will fail to recognize the fact that a pimple in the ear merely implies a fault in the general system, and that though it may contribute to the comfort of his patient to extinguish the pimple by a local application, it is sure to be followed by another in the ear or elsewhere unless the remote or constitutional cause is removed. The constitutional origin of many local diseases cannot be disputed, but the specialist who is not broadly trained in general medicine will fail to recognize this fact as soon as his neighbor, who has gone through such a period of preparation as I have previously indicated. What man in this presence would hesitate to choose between two specialists of admittedly equal skill in technique or pathological knowledge, but who were widely apart as to general experience? The specialist needs something more than a knowledge of technique or pathology or even skill in diagnosis. If he is called upon in the pursuit of his practice as a specialist to do operative surgery, he must not only possess skill and deftness in the use of his instruments, but must have what I consider far more important—a surgical judgment that informs him not only when and how to operate, but oftentimes when to decline to operate.

It must be admitted that the natural tendency in specialism is to limit its vision to the local malady, and to overlook the general dyscrasia or the remote lesion upon which its existence depends. The human system is a wonderfully complicated machine; no one part is independent of the other; the heart suffers with the brain, and the brain with the heart; the nerves and arteries are distributed and woven into every part of the fabric; and while it is necessary for the physician to study every organ in detail, it is equally necessary that he should study it as a whole when all the parts are put together and are in motion.

This, then, is the sum of the argument, and we find it difficult to understand how a man can justify himself in beginning the practice of a specialty, unless he has submitted himself after careful preparation in the schools to that stern tutelage which belongs to eight or ten years of general practice.

The Relation of Specialists to General Practitioners.—We have heard it said in some quarters that there has sprung up an antagonism between general practitioners of medicine and specialists. It

seems unfortunate that this issue should come, but having arisen, specialists themselves must put it down. A true and honest specialist will so conduct himself toward his clientèle as to strengthen the hands of the general practitioner, since the latter in nearly every instance sees the cases first, and is responsible for their diagnosis and treatment during a considerable period of time. Finally, when matters seem to make sorry progress, the question often arises in the mind of the patient, or his or her friends, whether it would not be best to consult some physician especially skilled in the line of disease now affecting the invalid. A well-trained general practitioner, taking quick advantage of the situation, will not hesitate to recommend a specialist of undoubted skill and honor. The greater the discretion he exercises at this juncture the stronger will be his hold upon his family. If he sends his patients to a consultant who brings success in the care of their maladies, it reflects upon the skill and judgment of the family doctor in a high degree, and the converse is equally true. That physician who is quickest to recognize the necessity for the opinion and aid of a specialist, not waiting for the patient to move in the premises, but promptly calls to his support the strongest and honestest man within his reach and invokes his special skill in the conduct of a needful case, will thus avoid blame for delay, or, mayhap, disaster. It is a common habit among specialists to make remark of the family physician in this wise: "My dear madam, you have fallen into fortunate hands; your physician is a man of skill and experience, and while no man, however wise and erudite, is competent to cover, either in his diagnosis or treatment, the whole field of medicine, your physician will always in doubtful cases select as counsel men who will bring substantial aid in your distress, and advancement of your interests." Such suggestions are always sure to strengthen confidence in the family doctor, and reflect credit upon the specialist.

When all interests concerned in this phase of the question recognize the fact, and in its recognition act accordingly, that specialists need help from the general practitioner quite as often as the general practitioner needs help from them, it will be better for physicians, general and special, as well as their patients. A duty that is imperative, one that the specialist cannot escape or shun, is to resign all general practice upon entering a special field. Unless this is cheerfully and wholly done the general practitioner is not treated fairly, and he will not be slow to recognize the fact. There is no real conflict between the general practitioner and the specialist and it must not be allowed to appear that there is, by any coloring that is thrown upon

the screen which perverts the facts. This is a side of the question that would permit of much elaboration, but on this occasion it must suffice for me to make only this passing allusion to it.

Reciprocal Relations between Specialists.—Not second in importance to, but quite abreast of the preceding subdivision is the consideration of the relations of specialists to each other, and considerable observation and experience have served to convince me that there is much opportunity for thought under this head, as well as for improvement in these relations. In the presentation of this part of the subject I shall especially consider it with reference to the departments of medicine which fall within the particular province of this Association to discuss—namely, surgery and gynæcology.

To-day, all will acknowledge the fact that the tendency of the successful practice of gynæcology is toward the surgical side of the subject. It is as indispensable for the gynæcologist to be a practical surgeon as it is for the physician to be a gentleman. Not that every gynæcological patient must needs have surgical aid, but as we come to understand the pathology of the pelvis and abdomen better, we appreciate that the requirements of minor gynæcology are becoming fewer and less. It is not many years since the possession of a Ferguson's speculum, a caustic-holder, a uterine dressing-forceps, and a Simpson's sound were considered by the majority of physicians an ample outfit for the practice of gynæcology. If, indeed, there were a favored few,—favored either through location of residence or perfection of training,—that added a number of other instruments to their armamentaria, it still remains true that in the hands of the majority who made pretense to practice the art, the instruments named were considered all-sufficient for the diagnosis, treatment and cure (?) of the sexual ills of women. It was common then for the teacher of gynæcology to spend much time in the description of the methods of use, and the multifarious applications to be made with the uterine sound. The opinion of the greatest number of gynæcologists to-day is that there is only very rarely a necessity for the employment of this dangerous instrument, and that on the whole it is one of the few inventions that woman would be the better for had it not been discovered. The important function of the teacher of gynæcology to-day will be to lay special condemnation on the frequent employment of this instrument and to warn against its dangers.

Modern gynæcology, too, must teach the modern pathology of diseases of the abdomen and pelvis, and as we come to more intimately

understand this pathology, together with an intelligent etiology of pelvic disease, we more and more frequently invoke the knife in promoting, or establishing, the cure of these maladies. Hence, there is, I say, an intimate relationship between surgery and gynecology. If I here pause to affirm that there is, likewise, an intimate relation between surgeons and gynecologists, it may not be out of place to remind you of a fact—one that all of you well know—namely, that this Association is the only existing special organization where these two departments of medicine are solely and distinctively united in society work.

The Ethics of Specialism.—From this very fact it will become the province of this Association to be the leader in cementing the relations between surgery and gynecology, and the expounder of the ethics that should govern the relations of these important subdivisions of the medical field. In this use of the term ethics I do not wish to be understood that there must be written a new decalogue of ethical dogmas, but instead I desire to bespeak a revival of the principles of Confucius, who 500 years before our Saviour, formulated what has ultimately come to be regarded as the Golden Rule. If Confucius is correctly translated he said, "Do not do unto others what you would not have them do to you." This is one of the inner truths, and may be regarded as the embodiment of all justice. Nevertheless, Chinese edicts, Roman pandects, Napoleonic codes, English common law, and American jurisprudence, each and all of them have failed to give it force in practice. I might have added for the sake of accuracy or to escape the imputation of carelessness, that that eminently wise, conservative, and forensic tribunal—the Supreme Court of the American Medical Profession—the Judicial Council of the American Medical Association, has even proven itself equally as incompetent to give this stalwart truth an interpretation that is acceptable to all, and has as signally failed to enforce its precepts.

In 1840, Samuel Jackson, that immortal physician, in addressing a class at the University of Pennsylvania said, "Every man of good sense, possessed of honorable sentiments, and a moral feeling of right and wrong, by the instinct of honesty will know how to conduct himself without a code to regulate his deeds." This utterance, by a man whose daily life was an epitome of ethical propriety, expresses all that is needful to-day on the subject, and is suited alike to the specialist and general practitioner.

When a gynecologist spends four years in college attendance, ten years in private practice, post-graduate study, and travel abroad, prepar-

ing himself under the law of natural selection for the specialty of his preference; when he abandons all his previous conceived notions of practice; abandons bone surgery, and the treatment of the diseases of the nose, throat, eye, ear and other organs of the special senses; ceases to treat diseases properly belonging to the neurologist; gives up fractures and dislocations, amputations and the like; when, I say, he abandons all these branches of practice and sends patients suffering with these maladies to those special surgeons who are skilled in the several departments named, in order that he may devote himself exclusively to the practice of abdominal and pelvic surgery and the treatment of gynecic diseases, is it not reasonable for him to expect a reciprocity of action on the part of his friend and brother, the general surgeon?

There are, happily, many individual instances where this reciprocity is recognized to its fullest extent, but I fear that many surgeons are either careless of, or indifferent to, the amplest realization of the importance of maintaining a high standard in these reciprocal relations. When the gynecologist turns over to his brother, skilled in the treatment of diseases of the joints, the injuries of this nature that apply to him, does he not fairly expect in return that the removal of abdominal and pelvic tumors and the like will be declined by the specialist in surgery of the joints? When the gynecologist refers all brain, neck, throat, and chest surgery to the surgeons especially skilled in these several departments, he certainly does not expect that these same surgeons will open the abdomen or invade the pelvic basin in woman on every and any pretext that can be found for so doing!

It cannot be expected, however, that the general surgeon will feel altogether like giving up a field so attractive as the pelvis and abdomen without some reciprocal compensation. Fortunately there is much remaining of interest for him to cultivate. If he will considerably yield to the gynecologist everything pertaining to the sexual diseases of women which it must be confessed properly fall within his domain, he can still cultivate the fruitful field that all abdominal wounds afford, and perfect himself in the technique of suturing the intestines, intestinal anastomosis, resection and the like, together with many other surgical diseases and accidents involving the necessity of abdominal section. It seems to me that it is very important to draw the line very accurately and closely in this matter. The removal of all abdominal tumors, and all surgery connected with the uterine adnexa has been the subject of special study by the gynecological surgeon; he was the first to point out its possibility, to develop its proper technique, and to apply

rigidly the rules of simplicity, cleanliness and drainage that have brought success to its practice, and reduced its mortality to a small fraction in the hands of competent men; for, whereas, only a decade and a half ago it was constantly our habit to estimate a record as eminently gratifying with a mortality of even twenty-five, thirty-three, or forty per cent., now we find it has been reduced to an exiguity of three per cent. for all operations, favorable and unfavorable. To say that these results have been mainly due to the indefatigable energy of Keith, Tait, Bantock, Price, McMurtry, together with others well known to you, is only to render unto Cæsar the things that are Cæsar's. Shall not these men and their coadjutors and disciples in all fairness be entitled to the opportunity of pursuing this field exclusively? When we recall the almost hermit-like exclusion that a man must submit himself to in preparing for this work and in perfecting his technique, together with the dangers that he must encounter in its prosecution, besides the mental and physical strain that he must undergo, then add to all this the limited income that he will receive during the earlier years of this stern tutelage, we can but regard it as almost a matter of justice that his claim to the territory under discussion shall be admitted and all its boundaries respected. Moreover, it has been demonstrated by results that the general surgeon cannot successfully cope with the gynæcic surgeon in pelvic surgery.

I hope that I have not been misunderstood in this matter; no man has a higher respect for the general surgeon than have I. During a number of years in my earlier life it was my fortune to occupy a place within the ranks of that able and accomplished circle. Within the last few years, however, my surgical preference has lain within the lines of gynæcology. It is perfectly fair, then, for me to state that I do not allow prejudice to enter into this critique. I am only candidly stating my own views on the subject, and I hope you will accept them for what little worth there may be in them. My object has been to contribute something toward the cure of an evil, and to ask this Association to take the subject into consideration, and to deal with it as it thinks best. I may have already spoken too long; perhaps I have said more than I ought to have said, but yet there are many sides of the question, and many bearings upon it that have been left untouched. I stand here only to make a plea for justice on all sides and not to antagonize any interests, individual or general.

Responsibilities of the Specialist.—The means of education at command both for specialists and generalists are almost limitless; the

schools are extending their terms of study, and otherwise improving their curricula; most of the states have established separate examining and licensing boards that in effect determine the quality of the teaching in the schools, and stimulate them to maintain a uniform standard. The massiveness and excellence of medical literature were never so high; the clinical opportunities for perfection were never so great; in short, never before could there be obtained such a high quality of preparation in the schools. The general practitioner now receives his certificate of study, and graduates with a perfection of knowledge that is even in excess of that which most specialists could boast of twenty years ago. With such immense gain in the equipment of the general practitioner, he is placed at once in competition with and soon will drive out the inferior or indifferent men who pose as specialists, as, indeed, such ought to be driven out. The specialist of to-day, therefore, is expected to be something more than was demanded a quarter of a century ago.

The tendency of the schools is to encourage specialism; in my opinion this tendency ought to be restrained. The schools should be thinking less of fitting students for the practice of specialties, and pay more attention to their equipment as general practitioners. Specialists will evolve fast enough from these general practitioners after they have become sufficiently experienced in general medicine, and the only road to the practice of a specialty should be through this channel.

Conclusions.—A few words to specialists in general, that is, to you and myself, and I have done. No man has a higher appreciation of the work done by specialists than have I, I am not here to condemn, but rather to encourage them in their work. Some of their greatest triumphs have been achieved in the State of Kentucky and in an area almost compassed by the sound of my voice. When Benjamin W. Dudley mastered the difficulties of stone in the bladder, he performed a service that will hand his name down the ages to the very crack of doom; when Ephraim McDowell solved the problem of ovarian cysts by curing Mrs. Crawford in 1809, in spite of personal threats and imminent danger, he accomplished something that will send his name spinning forever down the ringing grooves of change.

When the specialist in mental diseases restores an insane person to reason he accomplishes something that lays humanity under obligations. The etiology of many nervous disorders in women have been long understood to lie in the disturbed functions of the sexual organs, and the associated mental disease has been recognized by the gynæcologi-

cal specialist as only a symptom. These cases usually come first within the observation and management of general practitioners whose skill is taxed in diagnosis and treatment. They are generally correct in both. It must be claimed for gynæcology, however, and some of the men whom I see here present are pioniers in the work, that it has evolved the enduring truth that many of these mental disorders are complicated with sexual disease, and that if the sexual disease is cured reason is restored. This subject is still under judgment and promises a rich future for the worker in this field. It has already achieved sufficient success to give promise of yet greater results.

I repeat, that the responsibilities of the specialist were never so great as to-day, hence his training should be of the broadest and most liberal kind, and he also should be moulded after a broad and liberal model. He should not be of a jealous nature, and he must bear in mind that there is no antagonism between himself and the general practitioner. If the latter is becoming somewhat irritated over the fact that tramps have taken possession of some of his territory, his consolation must be that there is yet remaining enough for him to cultivate, and no one will be more happy to assist in driving off these tramps than the accomplished specialist.

The argument then that I desire to impress is :

1st. There is essential need for specialists. Divisions of labor in every field are demanded, and nowhere more than in medicine.

2nd. Specialists being a necessity, they must amply equip themselves by years of study, and devote themselves to a still greater number of years of general practice before they are justified in offering themselves as specialists.

3rd. They must conduct themselves in such a way as to merit the respect of the general practitioner, and to invite his co-operation in their work.

4th. The unwritten ethics of specialism demand that there shall be a reciprocal relationship maintained, not only among specialists themselves, but also between specialists and general practitioners.

5th. The opportunities for perfection in special lines of medical study are so great, and medical literature in both journalistic and text-book form is so rich, that a weighty responsibility is entailed upon the specialist, and his duties must be discharged with fidelity and honor.

6th. The schools ought to discourage any and all students who give promise of entering upon the practice of a specialty as soon as the

college doors are passed, and before the swaddling clothes of the professional tyro are slipped.

7th. A kinship between surgery and gynæcology—between the general surgeon and the gynæcological surgeon—ought to be strongly cultivated and stoutly maintained. Neither should trench upon the territory naturally belonging to the other, and to conserve these reciprocal relations will assuredly be the pride of this Association.

284 Franklin St.

ECTOPIC PREGNANCY.¹

BY HENRY D. INGRAHAM, M. D.

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Last December the writer was called in consultation to a neighboring city to see Miss L. age 19. Of the patient's history I learned that for the past two years she had been a book-keeper in a large mercantile house; health always good until present illness. Menstruated first at sixteen, usually regular, flow normal, occasionally suffered some pain. Had upon two or three occasions gone a week or two past her time. About four weeks before I saw the patient she should have menstruated, but she got her feet and skirts wet the last time she went out, and the flow did not appear. Her mother gave her some tansy tea and the flow soon came on and had continued ever since, sometimes, however, being absent for a day or two at a time. Six weeks before I saw her, one morning while at breakfast, she was suddenly seized with excruciating pain in the left inguinal region, was faint, but did not lose consciousness, was nauseated and vomited slightly, was chilly, weak and dizzy. Her mother assisted her to a couch where she lay during the forenoon. In about an hour the pain was less severe and the other symptoms gradually subsided so that in the afternoon she felt so much better that she walked a half mile and rode two-and-one-half miles in the street-cars and returned to see the family physician. He gave her some medicine, and the second day after she was so much improved that she went to her work one and one-half miles distant, riding in the street cars most of the way. She continued to work until the fifth day when she

¹Read at the meeting of the New York State Medical Association November 15, 1892.

fainted at the store and was taken home in a carriage. She remained at home three days and again went to work. Four days later she again fainted and was again taken home. After that she did not go to work, but lay upon the couch the greater part of the time during the day. The abdominal pain gradually increased and marked tenderness developed, her appetite failed, and nausea and vomiting occurred. At this time a very competent physician was called who put her in bed, gave morphine per rectum, made hot applications to the abdomen, yet she continued to grow worse. Upon examination the doctor discovered a swelling in the left inguinal region, but as it was not clear to him just what it was, he called in a general surgeon who, I am told, thought the mass was connected with the bowels in some way, and was the cause of the severe constipation, constituting almost obstruction of the bowels. He advised the removal of the patient to the hospital for an operation. To this her parents would not consent. The patient continuing to grow worse the writer was called, and first saw her about ten o'clock in the morning. She was very anæmic, with a small, rapid, feeble pulse of 140, temperature 104, excruciating pain in the abdomen, which was very tender, distended and tympanitic, a peculiar, anxious expression such as is usual in the later stages of general peritonitis—vomiting frequently, and bowels constipated. She had slept but little the night before and, in fact, not much for several nights previously. Owing to the extremely tender condition of the abdomen it was difficult to examine the patient satisfactorily, yet in the left inguinal region could be detected a large mass. Upon my suggestion chloroform was administered to the patient and a thorough examination made. The tumor was about the size of the foetal head and semi-fluctuating. Vaginal examination revealed the absence of the hymen, os patulous, the uterus crowded somewhat to the right, and three and one-fourth inches in depth, with a slight bloody shreddy discharge. After completing the examination I remarked to the attending physician that if the patient were a married woman I should think we had a case of ectopic pregnancy and that the proper treatment was an operation, but that it was very doubtful if the patient recovered owing to the general peritonitis. My prognosis, but not my diagnosis, was made known to the family, they objected to the operation unless they could be assured that the patient would recover. The following day a well-known gynaecologist was called who advised an operation, but feared the result would be fatal. Without any urging or assurance of recovery from me, the parents concluded to have the operation. The next morning the operation was performed under

ether and with the most thorough antiseptic precautions. When the abdominal cavity was opened the large mass in the left inguinal region was found enveloped by a very thin membrane which broke down as soon as the attempt was made to lift it out. This was a mass of clotted blood and tissue which was quickly removed. The left tube was ligated and removed. The right tube and ovary were apparently healthy. The intestines were one mass of adhesions and much distended with gas. It was necessary to draw the gas from them in several places with the aspirator to keep them within the abdominal cavity. The abdomen was carefully cleansed by sponging and the wound closed and dressed in the usual manner. The patient rallied from the operation but gradually grew worse and died from the peritonitis two days later. The operation apparently had no effect in prolonging life or in hastening the fatal termination. The tube was ruptured at the junction of the middle with the outer third. The debris was carefully examined, yet the foetus was not found, but chorionic villi were recognized under the microscope, thus definitely settling the diagnosis.

CASE II.—Last January my colleague, Prof. Mynter, was called to see Mrs. D., who being very ill and not having the best surroundings at home was taken to the Buffalo Hospital of the Sisters of Charity and through the kindness of the doctor was placed in my care. Her history, as given in the hospital record, is—age 25—American. Health—always good until present illness. Married five years, one child four years old, no miscarriages, menstruated first at fourteen, always regular, no dysmenorrhoea, last menstrual period the latter part of September; flow normal. In October she missed her period, and soon thought she was pregnant, as she began to have all the symptoms that she had observed in the earlier months of her previous pregnancy. A few days after her time to have menstruated in November, two months from the time when she did menstruate, without any apparent cause, she was seized with a sudden and severe pain in the left inguinal region, so severe that she fell to the floor in a faint. She was assisted into bed and had remained there ever since, now six weeks. She began to flow, and sent for the family physician, who told her she was having a miscarriage. For three or four days the flow was slight, and it stopped for two or three days, but began again more freely, was shreddy and stringy, and she was told that the foetus had been expelled. Still the flow continued very slight, and during the past two weeks often absent for a day or two at a time. Abdominal distension and tenderness very marked, pain severe, especially in the left side. Patient had chills,

fever, night sweats, vomiting, diarrhoea alternating with constipation micturition frequent. Pulse 130, temperature 103.5, respiration 30. She had been treated first for threatened miscarriage, then for miscarriage, the uterus had been curetted and vaginal douches given, and for the past four weeks she had been treated for peritonitis with opiates, tincture of iodine, and hot fomentations to the abdomen, but without benefit. Examination revealed a symmetrical but much distended and tender abdomen. The uterus was crowded forward so that the finger had to be passed up back of the pubis to feel the cervix; the body could not be discerned. The vagina posterior to the uterus was very much distended and apparently a fluid accumulation lay behind it. It was thought best to make an opening through the vault of the vagina, hoping to remove the cause of the trouble in this way. The patient was given an anæsthetic, and an opening was first made with an aspirating syringe, which filled with a thin, dark liquid; then a small opening was made with a knife, which was enlarged with a uterine dilator, and about three quarts of a thin, dark, stinking fluid gushed out. In this fluid was considerable solid matter, varying in size from a pea to a marble. The fluid was apparently mostly decomposed blood. You may have some idea of the fœtid character of the discharge when you are informed that the operation was performed in the presence of the senior class of Niagara University, and that nearly all left the room owing to the disagreeable odor of the fluid. The cavity was washed out with a 1 to 4,000 bi-chloride solution, then two T-shaped rubber drainage-tubes inserted. The abdominal distension immediately disappeared, as also the pain and vomiting; the fever was greatly diminished, and the patient slept well the following night with very little opium. From that time on her recovery was steady and continuous. Three days later one drainage-tube was removed, and two days after the other. For a few days the cavity was packed with iodoform-gauze, but soon there was no cavity to pack and the patient was well. There was but little discharge after the first day. The patient left the hospital in a little over two weeks perfectly well. Later I learned from the husband that he had had gonorrhœa just before marriage, and that for a long time he was troubled with gleet, and two years ago was operated upon for stricture; since then he has had no discharge. I have seen the patient several times since she left the hospital. She menstruates regularly, and is in perfect health.

CASE III.—Mrs. S., age 25; health previously good; married four years, one child three years old, no miscarriages, menstruated first at

seventeen, flow usually lasting four days, no dysmenorrhœa. Last menstruation December 18th. On February 25th, Dr. Tobie was hurriedly summoned to see the patient whom he found in a state of collapse. She had been suddenly seized with intense pain in the left side and had fainted and fallen to the floor. Face very pale, pulse extremely frequent and feeble, and extremities cold. The doctor applied warmth to the body, gave stimulants and later morphine. For three days she had retention of urine and the catheter was used. For about a month past, the patient had at different times felt sharp pains in the left iliac fossa, but upon keeping quiet for a few minutes they would stop. I was called by Dr. Tobie on March 3rd, to see the case with him. Patient was pale, pulse 85, temperature normal, pain and tenderness in the left inguinal region. Vaginal examination revealed the uterus crowded to the right, os patulous with a bloody shreddy discharge, and a boggy mass at the left. From the history of the case and the examination of the patient I agreed with the attending physician that it was a case of ectopic pregnancy with rupture into the left broad ligament, and probable death of the ovum. She was given one-sixth of a grain of morphine as required and kept in bed. She gradually improved but was confined to the bed nearly six weeks and not able to be around the house much for two months. Since then she has attended to her household duties. Menstruated normally April 5th, and has been regular ever since. November 1st, there was a small induration at the left and posterior to the uterus, about the size of the first joint of the index finger, but no pain or tenderness. The patient says that for the past three or four months she feels as well as ever. It might be said here that there was no secretion of milk in any of these cases when seen by me.

These cases are reported, not because they present any very unusual symptoms, at least in their earlier stages, but for the purpose of putting them on record, and to aid in calling the attention of the general practitioner to the earlier symptoms of ectopic pregnancy. It is the significance of the earlier symptoms that should be heeded before it is too late to benefit the patient. There is no doubt that ectopic gestation occurs much more frequently than is generally supposed, and unless the patient dies from hemorrhage or shock immediately following the rupture, nearly all can be saved if properly treated. I have now seen nine cases in which rupture had occurred and all were operated upon except the first one I ever saw, who I believe might have been saved by an operation, and the last one mentioned in this report who

did not need an operation but recovered. The first case I saw was before much was known in regard to this condition, but a *post-mortem* revealed the true state of affairs. The earlier symptoms of the first case reported to-day are typical of ectopic pregnancy except that usually the patient is not able to be up and attending to her work as this one was for the greater part of the time for nearly two weeks after rupture occurs. The fact that this patient was an unmarried woman may possibly have thrown the attending physician off his guard but symptoms should always be interpreted as their significance demands, regardless of the condition of life. Although the patient claimed she had not missed her period until she had been ill about two weeks, I believe she had missed the previous one, and that she had an idea that the suppression of menstruation was in some way the cause of her illness, yet she stoutly denied everything that would throw any light upon the subject. If I am correct in my supposition rupture must have occurred at about the sixth week of pregnancy. There is not much doubt of the recovery of the patient had the operation been performed sufficiently early, before general peritonitis occurred. Some may be inclined to doubt cases two and three being ectopic pregnancy. Number two has a typical history of this condition with rupture into the abdominal cavity, the blood becoming encysted in Douglas' cul de sac. If a ruptured tubal pregnancy was not the cause of the accumulation of blood, what was? Although her family physician and one or two others when called in consultation thought she had a miscarriage, there was nothing to indicate it except the slight discharge. All the evidence certainly tends to ectopic pregnancy, and I am not aware of any other condition that could account for all her symptoms.

In case three, the history of ectopic pregnancy with rupture of the tube into the broad ligament and death of the ovum, was apparently very clear, and I think the result shows the correctness of the diagnosis. It will be observed that the first two cases mentioned had each been under the care of two or more physicians for several weeks, yet a correct diagnosis had not been made. In the last case Dr. Tobie—to his credit be it said—made a correct diagnosis the first time he saw the patient, but not wishing to assume the entire responsibility promptly called in counsel.

The points which I wish particularly to emphasize are these :

When a woman, whether married or single, skips one or more menstrual periods, and is suddenly seized with sharp excruciating pain in the lower part of the abdomen, usually more marked on one side,

grows faint, she may lose consciousness or not, is nauseated, possibly vomits, is unable to sit up or to walk, or walks with difficulty, has great tenderness of the abdomen, usually more marked on one side, has a shreddy, stringy uterine discharge, and upon vaginal examination a boggy mass is felt generally at one side and posterior to the uterus, it is time for the attending physician to call on a competent consultant, unless he feels perfectly able to manage a ruptured ectopic pregnancy, as he probably has one to deal with. Even if all the above symptoms are not present, a consultation should be called. This should be done promptly, as delay has cost many lives. When rupture occurs abdominal section is the proper treatment unless the rupture be within the folds of the broad ligament when absorption generally takes place. Even then, when in doubt, operation is demanded. I believe the use of electricity in the treatment of this condition is worse than useless—it is trifling with human life.

THE FIRST INTERNATIONAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

DELEGATE'S REPORT TO THE NEW YORK OBSTETRICAL SOCIETY.

MR. PRESIDENT AND FELLOWS,

The First International Congress of Gynæcology and Obstetrics was held, according to programme, at Brussels, September 13-17, 1892, under the high protectorate of His Majesty Leopold II, king of the Belgians, and under the patronage of the Belgian government. In spite of the great drawback of the simultaneous appearance of the cholera scare it was a decided success; without this only drawback it would have been a *perfect* success.

The cholera scare affected the attendance in several ways. First of all, a great many intended meetings, medical and otherwise, arranged to be held in various parts of Europe during September, were declared off. The presumption with many who proposed to attend the International Congress of Gynæcology and Obstetrics was that this meeting would also fail to realize, especially as during the week preceding the Congress sporadic cases of cholera were reported in uncanny numbers from the Belgian capital and its vicinity. Many, therefore, did not go because they felt sure the meeting would be postponed. Many more

dreaded the prospective annoyances and hinderances of travel, and the quarantine phantom, and remained away on that account. Among the latter was Professor Hegar, as Dr. Sonntag informed me at Freiburg the week before the meeting, and a number of other great and shining lights in the gynæcological firmament whose names appeared on the original prospectus of the undertaking.

As it was, the owners of about 250 of the originally inscribed 400 names appeared upon the scene and participated in the proceedings of the Congress. As was to be expected under the circumstances, the ratio of absentees was greater among the foreign members than among the home contingent, in which latter I include the Belgians and French. Prominent Germans, English and Americans were *rara aves*.

Among those whom I can at this moment recall having had the pleasure of meeting were Robert Barnes, Alban Doran, Engelman, Goodell, Berry Hart, A. Martin, Parvin, Saenger and Spencer Wells. Only one or two of the eight gentlemen who figured on the pages of the official Journal of the Congress as delegated by the Government at Washington, and neither of the official delegates of the American Association of Gynæcologists and Obstetricians, were present. The American Gynæcological Society had neglected to send delegates. In fact the entire United States of America were represented by less than a dozen physicians. The representation from other countries, however, outside of Belgium and France, seemed equally poor as far as quantity was concerned; the quality, however, was unimpeachable.

The reception accorded foreign members was most hospitable, hearty, and need I add, polite, in view of the fact that the cousins of Frenchmen were the hosts. Visitors were made to feel at home and taken care of from the moment of their arrival. The hotel accommodations were good and abundant, the cholera scare reducing the number of strangers in town to below the usual figure.

A more delightful and suitable place for such a meeting than the city of Brussels can scarcely be found. The attractions and sights of the city are of a superior order; indeed the writer does not know of a city of the same size anywhere that can offer as much in this respect. The meetings of the Congress were held in the *Palais des Académies* situated in the finest, healthiest and most fashionable and aristocratic part of Brussels. The elegant hall, decorated with fine historical mural paintings by Slingeneyer, was of the correct size for such a meeting, fitted with the comforts necessary to render a stay enjoyable, and possessed the proper acoustic qualities. The postal,

telegraph and other arrangements in the building were complete. The exhibit of instruments was located in other rooms of the *Palais des Académies* which thus formed a complete home for the Congress and all its appurtenances.

The proceedings opened with a reception of welcome offered by the Belgian Society of Gynecology and Obstetrics to the members of the Congress and their ladies. This reception assumed the form of a *Raout-Concert* and took place in the *Palais de la Bourse* on the evening of September 13th. Its informal sociability, the absence of the stiffness too often noted on such occasions, and the geniality of our hosts admirably fulfilled the purpose of this social gathering. At its close, and before the first scientific meeting was held, the members had met old friends and made new acquaintances to an extent usually attained only toward the closing days and hours of similar gatherings.

The formal opening of the Congress took place on Wednesday, September 14, at 2 P. M. The entire afternoon was consumed in the usual addresses of welcome, responses, opening formalities, election of officers, etc.

The real scientific business of the Congress was done on Thursday, Friday and Saturday, on each of which days sessions were held from ten to twelve in the forenoon and from two to six in the afternoon. Owing to the non-appearance of many of the announced readers of papers, ample time was found for the reading and discussion of all papers presented, and there was no room for the usual complaint on this score.

An analysis of the scientific material presented to the Congress does not properly come within the scope of this report. Abstracts of most of the papers and of the discussions thereon have already appeared in some of the medical journals and more will soon follow. Three principal topics were offered for discussion: Pelvic Suppurations, Extra-uterine Pregnancy, and Placenta Prævia. Segond of Paris opened the discussion on the first of these subjects and offered the strongest argument yet presented for the treatment of most cases of pus in the pelvis by vaginal hysterectomy by *morcellement* after the method of Péan. Although his arguments were presented with all the fervor and earnestness of a sincere believer, and with captivating eloquence, he failed, as far as the writer could see, to make new converts among those present. Vuillet, of Geneva, in reply, made a strong plea for aspiration, or direct incision and drainage, while Saenger preferred cœliotomy as the routine procedure.

A. Martin made fifty-six personally observed cases the basis of his paper on Extra-uterine Pregnancy. It was a masterly presentation of the subject, and culminated in the proposition to treat all cases of ectopic gestation by extirpation of the entire foetal sac, whenever practicable. In the discussion the cœliotomists had it all their own way; the advocates of morphine injections, aspiration and electricity were either absent or silent.

Berry Hart and Robert Barnes shared between them the honors of the discussion on Placenta Prævia, the former advocating podalic version, the latter detachment of the placenta, and, if necessary, dilatation by rubber bags as the procedure of election.

A meeting of this character can scarcely be considered complete and fully satisfying without the presentation of some startling and sensational scientific novelty. Thiriar, of Brussels, sprung the surprise upon the members by his paper on "Cuneihysterectomy, a new operation for the cure of uterine flexions," and detailed a case of ante flexion on which he had operated. He opened the abdomen, cut out a transverse wedge-shaped piece from the posterior wall of the uterus at the site of the flexion, and united the raw surfaces left after removal of the wedge by five catgut sutures. The removed wedge measured two centimeters in width, and its apex reached to just beneath the mucous membrane. The patient was cured of her ante flexion and its attendant symptoms. A cœliotomy for the cure of ante flexion, a condition which many of us consider of such little pathological dignity, was certainly a startling proposition. Thiriar, however, made amends by a most excellent paper on "Disturbances in the genital sphere of women, resulting from movable kidney."

An interesting feature of the meeting was the operations performed daily, from eight to ten in the morning, at the various hospitals, public and private, of Brussels, to any and all of which all members of the Congress were invited. The Gynæcological Institute of Dr. Jacobs offered the most attractive programme and drew the largest crowds. Stars of the first magnitude only were billed to appear there. There Segond performed hysterectomy by morcellement, Saenger operated for vaginal prolapse, Martin removed a fibromatous uterus by cœliopanhysterectomy, and Jacobs himself did cœliotomy. It was very difficult, however, to get anywhere near the site of operation, and I am not sure but that those who visited other hospitals, especially the Saint-Jean and the Saint-Pierre, did not derive greater satisfaction and more instruction.

A case of hermaphroditism, demonstrated by Dr. Rouffart at the Saint-Jean, was worth going a great way to see. At the Saint-Pierre the writer noted that patients were anæsthetized in an adjoining room, and carried into the operating room *entirely* naked. After being placed upon the table, sterilized towels were arranged over the nude bodies and the operation was begun.

The social events were numerous, highly enjoyable and successful, and so arranged as not to interfere with the scientific work. Excursions, for instance, which encroach upon the valuable hours of the day-time, were tabooed during the meeting week and scheduled for the week following, an arrangement worthy of extended imitation.

Besides the reception of welcome already mentioned, there were receptions by His Royal Majesty, King Leopold II, and by the Minister of Public Works, Industry and Agriculture. Dr. Jacobs entertained the members at dinner, and the Belgian Society of Gynecology and Obstetrics gave a banquet to which all were invited. The gala representation at the opera, free to members and their ladies, was an unequivocal success and a most delightful occasion. Verdi's *Aida* was sung and staged exquisitely.

King Leopold did not confine himself to offering the members the hospitality of his palace, but honored the Congress with his presence during the greater part of a long afternoon's session. He applauded each speaker right royally with his own royal hands. He captured all hearts by his benevolent mien, his gentle yet manly presence, and the sincere interest which he manifested in the success of the Congress.

The Exhibit of Instruments and Appliances pertaining to the practice of Gynecology and Obstetrics was modern in every sense of the term and a source of daily recurring interest to the members. No less than eight laparotomy and gynecological operating tables, all of the most modern construction, and a proportionate wealth of other gynecological and obstetrical sundries were on exhibition. No epoch-making innovation, however, was noted.

The meetings were presided over by the various presidents of honor in rotation. Kufferath, of Brussels, conducted the closing business meeting, which proved somewhat spirited, in a dignified and impartial manner. The success of the Congress was due, more than to any one other man, to Dr. Jacobs, of Brussels, the Secretary-General, whose tireless energy and perennial urbanity compelled the admiration and gained the love of everyone.

The principal topic of discussion at the final business meeting was as to when and where the Second International Congress of Gynecology and Obstetrics should meet. Some thought that four or five years hence would be early enough, others that two years would be none too soon. Three years was finally compromised upon. The original proposition advanced in the rules of organization, to hold the Congress alternately in Belgium and in Switzerland, was not accepted, although Geneva was selected as the place of meeting in 1895. A committee of nine, representing as many different countries, was appointed with full power to arrange the details of the next meeting. Jacobs, Auvard, Martin, Alban, Doran, Vuillet and Engelman are the names I can at present recall as appointed to represent their various fatherlands. After all business had been thus satisfactorily disposed of, parting addresses were in order. Parvin, answering for America, made the welkin ring with a patriotic address commemorating the achievements of American gynecology, and dwelt with manifest pride upon the names of McDowell, Sims, Emmet, Thomas, and others.

As already stated, the Congress, on account of the cholera, turned out less international than it was intended to be. Indeed it was more like a French Gynecological Congress with an attendance of delegates from other countries, than anything else. A speaker employing the English or German languages had no audience. So well was this understood that Germans, English and Americans all made use, as far as lay in each one's power, of the French language. Under the circumstances the French perpetrated was not always the most classical.

I close this imperfect and fragmentary report on the First International Congress of Gynecology and Obstetrics with the reiteration that, the unfortunate coincidence of the cholera considered, it was a great success.

That the Second International Gynecological Congress, Geneva, 1895, will be a perfect success, nobody who attended the first will hesitate to predict.

That the attendance of representatives from this country will be very much larger is equally certain.

Respectfully submitted,

GEORGE M. EDEBOHLS, M.D.

THE PREVENTION OF HERNIA AFTER INCISION OF THE ABDOMINAL WALLS.¹

BY GEORGE M. EDEBOHLS, A. M., M. D.

On June 27, 1891, I saw, with Drs. A. Frech and C. Nicolai, her attendant physicians, a stout lady suffering for many years past from a large umbilical hernia. The hernia had become irreducible four or five days previously, symptoms of strangulation had manifested themselves, and the skin and fat overlying the hernial tumor were in a state of low phlegmonous inflammation. All attempts at reduction failed, the lady's condition became critical and herniotomy was performed late at night on June 29th, with the kind assistance of Drs. Frech, Nicolai and Torek. After opening the sac it was found to contain the stomach, omentum and greater part of the small intestines, all adherent to each other and to the sac wall. After liberation of adhesions, reduction of the hernial contents, and ligation and removal of the sac, a large hernial aperture, circular in form, ten to twelve centimeters in diameter, with thin aponeurotic margins and situated in the median line just above the umbilicus, confronted us. The thin, sharp, fibrous margin was split all around by the knife to the depth of a little over a centimeter to obtain fresh surfaces for union, and the margins of the ring were brought together by transverse sutures in such a manner as to form a longitudinal line of union when approximated. The intra-abdominal tension, however, was so great that it required all my strength, without exaggeration, to draw together and tie the sutures. I recognized that sutures embracing both the skin and the margins of the hernial aperture, if tight enough to close the latter, would inevitably strangulate the already inflamed skin and fat. Buried sutures to close the hernial aperture were a necessity. Catgut was tried, but the great tension opened the knots of the slippery material as fast as I could tie them. Interrupted sutures of heavy pedicle silk were used until my supply gave out, when I closed the balance of the aperture with interrupted silkworm-gut sutures. Ten silk and nine silkworm-gut sutures were thus placed and buried by closing over them, with catgut sutures, the skin and fat. The patient unexpectedly recovered from the operation, or rather from the condition which necessitated it, and still more unexpectedly was radi-

¹Read before The New York Obstetrical Society, November 15, 1892.

cally cured of her hernia, and remains so cured to this day. Now comes the part that is pertinent to the subject of this evening. Beginning with three and ending with seven months after operation, every one of the buried silk sutures, one by one, ulcerated to the surface and was removed. Not one of the silkworm-gut sutures came away, but all remain in situ to the present day. After the removal of the last silk suture the little sinuses closed and the wound healed definitely.

This experience of a year and nearly a half ago induced me to employ the buried silkworm-gut suture in isolated cases of abdominal section where the tension upon the lips of the wound was exceptionally great. Meeting in each instance with the same favorable experience as in my first case, the idea finally dawned upon me: Why not suture every operative wound of the abdominal parietes with buried silkworm gut? A better and, in view of the non-absorbability of silkworm gut, more permanent provision against the occurrence of hernia could not be imagined.

Acting upon this thought I have since May 1st of the present year closed all wounds of the abdominal parietes, made by me, in the fashion presently to be detailed. That part of my work, during the months of May, June, July and October, to which the method was applicable, embraced sixteen coeliotomies, nine operations for shortening the round ligaments, five single and one double nephrorrhaphy. In all, forty-one incised wounds of the abdominal parietes, in which, at a low estimate, upward of two hundred and fifty silkworm-gut sutures were buried.

The interrupted buried suture of silkworm gut, placed three or four to the inch, was invariably used. In closing coeliotomy wounds each buried suture included fascia, muscle and peritoneum, care being exercised, of course, that the cut edges of each of these tissues be accurately opposed to each other. In my modification of the operation for shortening the round ligaments the anterior wall of the inguinal canal is slit open along its whole length (*New York Medical Journal*, October 11, 1890). In sewing up, each buried suture embraces the lips of the wound of the aponeurosis of the external oblique and that portion of the drawn-out round ligament which comes to lie in the canal. In performing nephrorrhaphy the buried sutures pierce the muscles and fascia of the abdominal walls, the fatty capsule and capsula propria of the kidney and the kidney itself. In tying each silkworm suture a double or friction-knot is first applied and on top of this two single knots. The ends are then cut as short as possible. Such a knot properly and tightly tied never slips nor opens.

It will thus be seen that in each wound the buried silkworm suture embraces all the cut tissues except the skin and the subcutaneous fat. In ventro-fixation, nephrorrhaphy and shortening of the round ligaments, the uterus, kidney and round ligaments respectively are likewise embraced in the loop of the suture. The skin and fat are united over the buried silkworm sutures by a running suture of catgut drawn just tight enough to gently approximate the cut edges. Of course, any other material may be used instead of catgut, to unite the skin. Catgut has the advantage of lasting long enough to insure firm union and of not requiring removal.

We all know that, in closing wounds of the abdominal parietes, if all the tissues are embraced in one loop of whatsoever suture you please, the tension necessary to securely hold together the deeper parts, the muscles and fascia, is so great as to cause the suture to cut through the skin and subcutaneous fat. Often also to cause necrosis of parts of the fatty tissue embraced and thus interference with wound-healing. In line with good surgery, therefore, is the principle to apply separate sutures to tissues of different densities and under different degrees of tension.

Why is silkworm gut preferable to silk, silver wire, kangaroo tendon and catgut for buried sutures of wounds of the abdominal walls? With silk it shares the properties of ease of tying and of permanency, but excels it in non-irritating and aseptic qualities. Silver wire is equally permanent and equally aseptic; it is, however, more troublesome to tie, less pliable after burial, and the metal cut ends are perhaps more irritating than the ends of silkworm gut. Kangaroo tendon and catgut are absorbable and cannot, therefore, give a permanent guarantee against hernia; besides which no reliance can be placed upon the durability of the buried knot after it becomes moistened.

Of what avail is kangaroo tendon, or eight-day, eighteen-day, or even twenty-eight-day catgut, if the buried knot slips or opens on the first, second or third day, as I have frequently known it to do. Besides which, it is a mistake to take it for granted that sutures become superfluous after a week, or two, or even three, and that union by that time is so strong as to defy separation, especially in wounds of the abdominal walls, which are exposed to strains such as obtain nowhere else in the body. I have repeatedly known diastasis of the recti and separation of the fascia along the line of incision to occur in coeliotomy scars six months and longer after operation. Whether the intestines will then prolapse far enough through the rent to form a constantly

visible tumor is merely a question of length of mesentery in the particular patient.

Differences of opinion as to what constitutes a ventral hernia will possibly explain the discrepancies in results claimed by different operators. The man who insists on the presence of a constantly visible tumor before he admits a ventral hernia may have quite a long series of cases without this unfortunate result. The more self-critical and less easily satisfied surgeon will record as a ventral hernia every case in which, after *cœliotomy*, the recti and the fascia separate along the line of incision so as to leave the abdominal contents, at that point, separated from the external world only by a covering of peritoneum, fat and skin. Applying this criterion, ventral herniæ following *cœliotomy* are by no means as infrequent as we would desire them to be.

Silkworm gut, then, is the material *par excellence* for buried sutures of wounds of the abdominal walls; its non-irritating properties, its non-absorbability and the security of the knot render it about ideal.

Of course the *conditio sine quâ non* in its successful use is perfect asepsis. Next in importance comes the matter of not drawing it so tightly as to strangulate the tissues embraced in the loop. Care in tying the knots and in cutting the ends *very* short are points not to be lost sight of. With all the above conditions fulfilled, nothing but satisfaction will result from the use of the buried silkworm suture.

I sterilize my silkworm gut by boiling for an hour in water and then transfer it to five per cent. carbolic acid solution, where it is kept until wanted.

I will now endeavor to answer a few objections that may be made against the use of buried silkworm sutures.

First, they may cause suppuration and ulcerate out. To this I answer they will not do so, except as a matter of mere accident, if buried aseptically and not drawn so tight as to strangulate the tissues. This answer is based upon experience. Of all the silkworm sutures I have ever buried but two have appeared again, and that in a patient in whom, three weeks after a ventro-fixation of the uterus, a slight separation of the lips of the cutaneous wound occurred as the result of a *trauma*. Two of the buried silkworm sutures became infected and were cut out. Then the wound again closed, permanently burying the four sutures remaining in situ. In all the other wounds in which I buried silkworm sutures I obtained primary union and permanent retention of the sutures.

Another objection that may be raised is that the buried sutures may travel in the tissues, or perhaps even wander inward into the peritoneal cavity. A moment's thought, however, will show that if the sutures change position at all, it will be in the direction of the knot, *i. e.* toward the surface of the body.

Cutting *very* short the ends, after the knot is tied, will protect against a third possibility:—the protrusion, later on, of the cut ends through the skin. Even should this happen the surgeon could then remove that particular suture, or the patient may be instructed to seize the projecting end, pull upon it until the knot appears, cut the loop on one side behind the knot and withdraw the suture. This necessity has never arisen in my practice.

In performing ventro-fixation of the uterus I have fastened the uterus to the abdominal wall by two or three of the buried silkworm sutures used to close the peritoneum, muscle and fascia. I confess I had some misgivings in those cases where a subsequent pregnancy was possible, as to whether the uterus in that event would be able to tear itself away from the buried suture. None of my patients thus operated on has as yet become pregnant and personal experience on this point is wanting. Recorded experience, however, goes to show that pregnancies have occurred and gone to term without a hitch in uteri ventrofixated with buried silk.

The special advantage of this method of suture:—buried silkworm for the deeper tissues, catgut for the skin and subcutaneous fat—over other methods, as applied to very fat patients, is self-evident.

With this method of suture of the wound I have allowed my coeliotomy cases to get up a week earlier than formerly. They now, as a rule, leave bed at the end of two, and hospital at the end of two-and-a-half to three weeks. Nor do I require my patients any longer to wear an abdominal supporter after operation. At first, I confess, I was afraid to do without them. As experience and my confidence in the buried silkworm suture grew, I gradually abandoned the supporter, and now advise against its use after operation, nor have I thus far had occasion to regret this course in a single instance. My patients have thus gained in three directions:—a shorter convalescence, relief from the annoyance and expense of abdominal supporters, and greater security against hernia.

The writer feels that, as far as he is concerned, the question of the prevention of abdominal hernia following operations is practically solved. It was my intention to pursue these observations a little further before

reporting upon the matter, but when I was requested by your presiding officer to prepare a short paper for this evening I found I had nothing else to offer which would be likely to interest you. I close with the hope that this communication may induce my colleagues to give the method advocated a trial. If they derive from it the same satisfaction that I have, I will be sure of their thanks.

To prevent misunderstanding and possible misinterpretation I will distinctly state that I do not advance any claim to priority in the use of the buried silkworm suture. I was led to it by necessity, June 29th, 1891, and practiced it in a desultory fashion until May 1st, 1892, since when I have applied it to every incised wound of the abdominal wall I have had occasion to make. Until four or five months ago I was unaware that any one else was systematically using the buried silkworm suture; since that time, however, I have learned of quite a number of surgeons using it in practically the same way as myself. If anything has been published upon the subject it has escaped my attention.

CRANIOTOMY UPON THE LIVING FŒTUS IS NOT JUSTIFIABLE.¹

BY CORNELIUS KOLLOCK, A.M., M.D.

Cheraw, S. C.

Craniotomy is doubtless the oldest of all obstetric operations, and the hook and perforator antedate all instruments ever used in obstetrics. The operation, of course, implies the death of the fœtus and a frightful mutilation of its body, often accompanied by serious lacerations of the vagina and adjacent tissues of the mother. All this is done solely for the protection of the life of the mother. When there is absolute certainty that the fœtus is dead, craniotomy is a justifiable operation; but even then there are circumstances under which its propriety may be questioned, or it may be positively forbidden. A contraction of the pelvis so great as to reduce the measurement of the conjugate diameter to one inch and a fourth, as sometimes happens, positively forbids an attempt at craniotomy, for the space in which the instru-

¹Read before the Southern Surgical and Gynæcological Association, Louisville, Ky. November 16, 1892.

ments must be used is so narrow as to render the work impossible without great laceration and mangling of the parts, involving sometimes the bladder and intestines.

I was once called in consultation to a case in which craniotomy had been done. Only portions of the foetus had been removed. Upon making a digital examination, also using the pelvimeter, I found the patient with a conjugate diameter measuring one inch and three-eighths; fecal matter was passing from the vagina through a laceration of the intestines; the bladder was also torn, and there was a constant dribbling of urine. The physician in attendance on this case was a man of more than ordinary intelligence and large experience. His weakness consisted in his inveterate prejudice against the use of the knife, more especially against the abdominal section. This would have given the woman a very fair chance for life, and in all probability have saved the foetus. Although she had not been in labor long enough to exhaust her strength, she died very soon from hemorrhage and shock.

This extreme case happened a number of years ago, at a period in my professional career when I was not entirely ready to denounce craniotomy, or to embrace laparo-hysterotomy, still it made a deep impression upon me, and set me to thinking how the murder of helpless infants could be avoided. I did craniotomy but once after this, and thank God it was upon a foetus that had been dead several hours when I was called to the case. Craniotomy is done solely for the protection of the life of the mother, yet it often destroys the life which it proposes to save. We have no positive proof that Hippocrates, Celsus or the Arabian physicians destroyed the life of the foetus, but the operation was considered justifiable in their day. And when we consider how many women would have died without it, we may appreciate in a measure the tenacity with which it has been upheld. The mortality of mothers was greater in times past than now, but since Beaudeloque, Hemming, Jones, Churchill, and Tyler Smith rate it at 40 or 50 per cent., the results of craniotomy cannot be considered satisfactory. Yet, if we investigate the subject more fully, and in chronological order, we shall see that, while the mortality of mothers is less now than at any former period, owing to the advance in obstetric science and the more skillful performance of the operation, the number of foeticides is greatly increased. This fact may be in part explained by assuming that the more dextrous one becomes in craniotomy, the more disposed he is to resort to it to avoid the risk of waiting too long. While we hope and believe there are but few in the profession who would resort to craniot-

omy for a foul and wicked purpose, we must fear there are some who do the operation ostensibly to save the woman's life, but really to protect her against the troubles of maternity, or to shield her character from shame.

The flat, rickety pelvis is the most common cause that renders a natural delivery of the fœtus impossible. Professor Isaac E. Taylor in an able paper in the *American Journal of Obstetrics*, proves that in all cases of deformed pelvis, in which the contraction is so great as to reduce the measurement of the antero-posterior diameter to one-and-a-half inch, craniotomy is not practicable. Perry, in the *American Journal of Medical Sciences*, goes even farther. He contends that, in a pelvic contraction with a conjugate diameter of two-and-a-half inches, the results of craniotomy are no better than those of the Cæsarean section—not as good. He might easily say more, for where the pelvis is so contracted and gives so little space to work in, the mangling of the parts excites a septic influence. There are cases of obstructed pelvis caused by rickets or by exostotic growth on the sacrum, or other points in the pelvic cavity, in which it would be wrong—criminal—to attempt craniotomy on the living or the dead fœtus. The severe treatment required, superadded to the exhausted condition of the woman, would very materially lessen her chances of recovery. All operations of craniotomy are after the labor has been in progress thirty-six or forty-eight hours, sometimes longer. Long-continued contractions of the uterine muscles and frequent manipulation of the parts, in efforts to turn or apply forceps, produce confusion which excites a septic influence and prevents union by first intention.

What then is our duty with the light before us? Are we to hold to the barbarous murderous practice of craniotomy, because of its antiquity? Are we to allow conservatism to drift us into criminal old fogyism? In addition to the opinion of men of brain and experience, we have valuable statistics of the present time, that should banish from the mind the thought that craniotomy on the living fœtus is a justifiable operation.

Recent advances in Obstetrics, Gynæcology and Abdominal Surgery contribute largely to a demonstration of the fact that a timely resort to surgical interference in pelvic obstruction is the great factor in success. Not long since, in Germany, out of 149 cases of contracted pelvis, 109 women and 136 children were saved—a preservation of 245 lives. If craniotomy had been done in those cases 149 children would

have been destroyed and probably fifty women—perhaps more—making a sacrifice of at least 199 lives. In many of these cases exhaustion had supervened and septic influence had already been excited. This, added to a tardy disposition to union by first intention, caused by contusion of the parts involved in the uterine incision, lessened materially the women's chances for recovery. Zweifel was successful in twenty-nine cases out of thirty. Schauta did Cæsarean section fifteen times without a single death. Schauta's and Zweifel's operations were done in an early stage of the labor, before mangling and contusion of the tissues had excited a septic influence, and before the strength of the women was exhausted. There was a time when the results of the Cæsarean section with the American surgeons were not equal to those on the continent across the water. But in the last few years a great change for the better has been seen in hospitals and in private practice. Recently in eighteen operations performed in Louisiana, fourteen were successful. Of eight in Ohio, six were successful. In December, 1891, Dr. Charles Jewett, at the Long Island College Hospital, did Säger's Improved Cæsarean section twice successfully—saved both mothers and infants. Dr. Howard A. Kelly, of Baltimore, has recently done the operation successfully four times. Dr. H. C. Coe, of New York, has done it twice successfully within a very short time. Dr. Joseph Price, of Philadelphia, has done Cæsarean section a number of times successfully. Dr. Price prefers Porro's operation. There are many who prefer Säger's Improved Cæsarean, while others prefer Porro's. We will not at present attempt an estimate of the comparative merits of the two operations, for it is not easy to say to which the preference should be given.

While the literature of Cæsarean section is voluminous, it would be presumptuous in one whose experience is so limited as mine to attempt to present anything new. Dr. R. P. Harris, who has made Cæsarean section a special study, and has collected more valuable statistics on the subject than, perhaps, any man living, is able to give an opinion of value, and one that must attract the attention and command the respect of all. Dr. Harris considers the two elements of success to be an early operation and perfect technique. Would it not be well to add, as a third element of success, a quick performance of the operation? The shock in all abdominal operations, especially in Cæsarean section, is always increased by too long access of atmospheric air to the cavity. In all the abdominal sections I have ever done or witnessed, I have always observed the longer the cavity was kept open the more unfavorable was the prognosis.

A case of pelvic contraction in which I operated successfully a short time ago confirmed me in the belief that the sheet anchor of success is an early operation. Let the surgical work commence before the woman is bereft of strength, and before the parts are in a condition to take on unhealthy action. In this case, I bore in mind the importance of rapid work, and kept the cavity exposed as short a time as possible.

The operation was done March 20, 1892. Patient aged 28 years,—had been in labor about three hours when I first saw her; general health was apparently good, but there was a severe pelvic contraction, consequent upon some diseased condition of the bony structure of the pelvis. She had had craniotomy done twice—in July, 1885, and in September, 1887. The parts were very much mangled each time, so much so, in the second labor, that she came near losing her life. When I was called to her, the attending physicians, both intelligent men, informed me that they had destroyed two children for her, and for that reason declined a third craniotomy. They also said they thought the contraction greater than in the previous labor. In this they were probably correct. I made a careful exploration of the pelvic cavity, and found the conjugate diameter measuring not more than one inch and a fourth. I refused to do craniotomy, and proposed the Cæsarean section, which was readily consented to by the patient and her family when they were told that she could probably stand the operation, and that it would give the child a fair chance of life. She said, if another child must be sacrificed, she would go with it. I did Säger's Improved Cæsarean section, and was as rapid in the work as I dared to be. The operation consumed just forty-four minutes. The patient rallied from the shock as soon as the effect of chloroform wore off. I never had a case do better after a far more simple operation. The pulse was never more than 95, and the temperature never above 98. There was perfect union of the incision by first intention, and the sutures were removed on the tenth day. Mother and child, seven months after the operation, are doing finely.

Is there any special reason why the Cæsarean section should be more fatal than laparotomy for the removal of ovarian cystoma—or other pelvic growths—when performed under proper circumstances and by skilled and experienced hands?

The Cæsarean section, if historic accounts be true, and we have no reason to doubt them, is nothing new. It was probably done many centuries ago, and it has been done occasionally during the last few centuries. According to Dr. Harris, the uncivilized inhabitants of

Uganda, in the heart of Africa, have been in the habit of performing it. This fact was brought to light by Robert W. Felkin, of Scotland, who saw it done successfully by a native operator. And women have been known to do it on themselves.

From present data we have no means of estimating the antiquity of the operation. The fact that the African laparatomist washes his hands and instruments, and bathes the abdomen of the patient with palm wine, such as was used by embalmers in ancient times, suggests that he may have some vague and indefinite idea of asepsis. This idea may, perhaps, be traced back traditionally to the period when the bodies of the Pharaohs and other distinguished Egyptians were embalmed for deposit in the Pyramids.

These people, ignorant not only of Anatomy, Gynæcology and Abdominal Surgery, but of everything that would seem to fit them for such work, go readily into this severe capital operation, and perform it successfully, while many of the learned and skilful surgeons of our own age and country, shrink from it, and resort to the barbarous act of destroying the innocent foetus, while imperiling the life of the mother.

It is my honest conviction that 85 or 90 per cent. of the cases of obstruction of the pelvis forbidding the delivery of the foetus in the natural way might be saved by a timely resort to Cæsarean section.

There is a serious moral aspect of this matter which we are in duty bound to consider. It is our object to save life, not to destroy it. Besides this, the innocent foetus has rights which it should be our care to protect.

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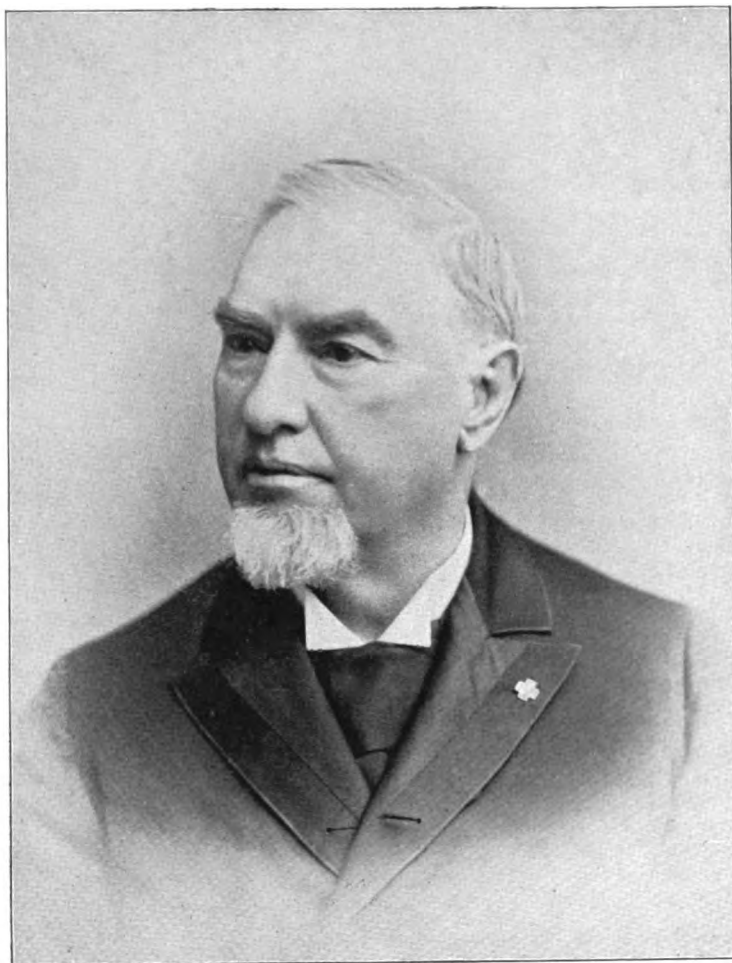
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EDITORIAL.

THE TURNING OF THE TIDE.

A VERY significant paper by Dr. Kollock of South Carolina was read before the Southern Surgical and Gynæcological Association on November 19th of this year and appears in this number of the Journal. The title of this paper, "Craniotomy upon the Living Foetus is not Justifiable," explains its meaning and the reason of its significance. This is the first time in medical literature, we believe,—at least in this country—that any medical man has been bold enough to make such an assertion, unequivocally and over his signature. Moreover, he does this before one of the most prominent medical societies in the United States. The subject is discussed and even favorably by several of those present. We must further bear in mind that never before in the history of craniotomy has this operation been considered a safe one even on grounds of expediency, while now, thanks to asepsis, its mortality and lesser injury to the mother has been reduced to a minimum. How would such a paper have been received even five years ago? With what outraged amazement would not such a ridiculous dictum have been viewed? The moral cowardice of some, the blind subjection of others to the conventional and oracular sophisms of authorities more intelligent but less honest than themselves, the love of self-interest which makes so many men indignantly spurn any attempt to increase their moral responsibilities, would have marked such a man as dangerous to the welfare of the com-

munity, an enemy to his colleagues, and a fool for his pains. There is an epithet very much in vogue at the present day, one pregnant with obscure but awful meaning in the minds of unthinking men, satisfied with superficial knowledge. To these "that which is right," and they deem nothing more damnable than any departure from their own standard of conventionality. The medical profession furnishes its quota to this class. Therefore, a few years ago Dr. Kollock would, doubtless, have received his death-blow from being called a "reactionist," and we scarcely expect him altogether to escape physical injury even to-day, from the crushing weight of this denunciation. We have often heard, in recent years, physicians of all grades in the profession announce publicly their great sorrow at having been obliged to kill so many unborn children, the sad necessity being the saving of the life of the mother. We have always felt that these men must be impressed with a marvellous sense of reverence or be very wanting in a sense of the ludicrous to be able without laughing thus to arrogate to themselves a special appointment as abiders of Divine Justice and as God's executioners. There is no record, we believe, of the grant of such extraordinary powers from Heaven to the medical profession, from the days of Mount Sinai to our own. The sophistical arguments brought forward to "justify the means" in this case melt away at the first breath of logical reasoning. We cannot escape the acknowledgment that the unborn infant has the same right to live, *on all grounds save those of expediency*, as has the mother, whatever may be the physical conditions. The only mission of the physician is to save life and to cure disease; it is surely a monstrous claim that because we are so ignorant of physical laws that we are unable to save a mother's life by direct means, we are thereby justified in killing an innocent human being in order to accomplish our purpose. If we killed babies to eat them, as do many of the lower animals to their young, there might be some palliation for the offense on the ground of personal necessity, but to do so by foeticide, in cold blood and against the dictates of right reason, is an act of which the brutes are fortunately incapable. Foeticide must always be, whatever the ignorance or love of expediency of our law-givers may call it, nothing else than *unjustifiable homicide*, in lieu of an uglier name. Let us hope that the profession are at last awakening to a realization of the enormity of this unnatural procedure, of its terrible injustice. Perhaps Dr. Kollock and his confrères are the first indication of the turning of the tide.



ABRAHAM REEVES JACKSON, M. D.

NEW YORK JOURNAL OF GYNÆCOLOGY
AND OBSTETRICS.

IN MEMORIAM.

ABRAHAM REEVES JACKSON, A. M., M. D.

Born June 17, 1827.

Died November 12, 1892.

Doctor A. REEVES JACKSON was a rare man, well beloved by all who knew him; esteemed and respected alike as physician, counsellor, citizen and friend. By his death the medical profession has sustained the loss of an able, progressive and yet conservative leader, and the State of a noble and worthy citizen. His unfailing geniality, courtesy and kindness endeared him to all with whom he came in contact.

As a specialist in gynecology he was a most accurate diagnostician and a skillful and conservative operator. His practice was largely consultation and he was invariably courteous and considerate in his relations with his professional brethren.

He was one of the most forceful and admirable lecturers of these times. He possessed in a rare degree the faculty of imparting knowledge and of impressing upon his audience the salient points of the subject under consideration. His diction was always elegant and his delivery unaffected but full of strength. He was eloquent, epigrammatic and always interesting. He was also one of the very few clinicians who could operate and lecture at the same time. He was an acknowledged authority upon his specialty and upon medical jurisprudence.

He was a member of the American Medical Association, the American Academy of Medicine, Chicago Medical Society, Chicago Medico-Legal Society; a fellow of the Chicago Gynecological Society, a member of the British Gynecological Society; an honorary member of the Detroit Gynecological Society and a corresponding member of the Boston Gynecological Society.

Doctor Jackson was connected with the *Chicago Medical Register*, the *Western Medical Reporter of Chicago*, and the *Independent Practitioner of New York*, as editor or associate editor. He was also a liberal contributor to medical literature and his articles were always welcome on account of their intrinsic worth and their exceptional grace and ease of style.

Upon looking over his papers several unfinished articles were found

A list of his contributions to medical literature is appended to this notice.

and also a great mass of material for a work on gynæcology upon which he had been engaged for several years.

Abraham Reeves Jackson was born on June 17, 1827, at Philadelphia. He received his early education in the public schools of that city, and was graduated from the Central High School in 1846. He immediately took up the study of marine engineering with the intention of entering the United States Navy. After a few months, however, he decided that engineering was not congenial, and commenced the study of medicine and was graduated from the Medical Department of the University of Pennsylvania in 1848. Immediately after his graduation he removed to Stroudsburg, Pennsylvania, and there resided and practised medicine for twenty-two years. In 1850 he married Harriet Hollinshead of Stroudsburg, who died in 1865, leaving two daughters, who still survive.

In 1862 he entered the United States Army as Acting Assistant Surgeon, but was soon promoted to the position of Assistant Medical Director of the Army of Virginia. At the close of the Civil War he returned to Stroudsburg and resumed the practice of his profession until 1867 when he accompanied the now famous "Quaker City" excursion to the Mediterranean in the capacity of Ship's Surgeon. In the records of that trip, so entertainingly written by Mark Twain, Doctor Jackson figures as "my friend, the Doctor," and the picture there drawn is true to life. On his return from Europe he remained in Stroudsburg for two years and then removed to Chicago.

From this time he limited his practice to gynæcology, and soon became famous in that specialty.

He appreciated the urgent necessity of a hospital exclusively for women, and with his characteristic energy at once set about securing such an institution for Chicago. In September, 1871, as a result of his own labors and of the aid of influential friends, the Woman's Hospital of the State of Illinois was incorporated. Doctor Jackson was appointed surgeon-in-chief to the hospital and retained this position for several years.

In 1871 he was married to Julia Newell of Janesville, Wisconsin, who was a devoted and faithful helpmate and an able assistant in his professional work, and who survives him. As a result of a concourse at Rush Medical College, in 1872, he was elected lecturer on diseases of women in that institution; and a year later, in appreciation of his services and high attainments, the college conferred upon him the honorary degree of M.D. In 1874 he was elected by the Chicago

Medical Society, editor of its official organ, the *Chicago Medical Register*.

Three years later, while performing an operation, he received an infective wound from which he never fully recovered, and which, in fact, was responsible for his death. In 1877 he resigned his position in Rush Medical College and two years later severed his connection with the Woman's Hospital of the State of Illinois.

Dr. Jackson was a strong advocate of a higher standard of medical education, and in 1882, after long thought and much arduous labor he with two associates secured the incorporation of the College of Physicians and Surgeons of Chicago, of which he was President and Professor of Gynæcology from its incorporation until his death. The college stands as a most fitting monument to his genius, persistence and foresight. His one aim in the management of the college was ever to increase the standard, and to graduate men whose attainments should be second to none among the medical graduates of the country. In this desire he was ably seconded by his colleagues.

In 1883 he was elected President of the Chicago Gynæcological Society of which he was a charter member. In 1889, he was elected President of the Association of Acting Assistant Surgeons of the United States Army, and this position he held at the time of his death.

He had a severe attack of illness in 1889, arising from the old infected wound and similar in symptoms to the attack which caused his death. As soon as he was able, he, in company with Mrs. Jackson, made a trip around the world, during which he visited some of the most important hospitals and was an honored guest of many of the most celebrated surgeons and gynæcologists of Europe. During the first six months of this trip he suffered from the effects of his late serious illness, but during the last half of his journey he enjoyed robust health. On his return to Chicago in 1890, he at once resumed active practice, and appeared as active, as energetic and in as good health as usual. He was elected President of the American Gynæcological Society in 1891.

Doctor Jackson's last appearance before a medical audience was on September 12, 1892, when he read before the Chicago Medical Society a paper entitled: "*Electricity vs. Surgery in Gynæcology, a Charge to the Jury*," and in the discussion defended his position with his old-time ease of style and eloquence.

On November 1, 1892 he began to feel numbness in the left side, a symptom of his previous attack and one whose gravity he thoroughly understood. The following day he was stricken with apoplexy and Dr.

James H. Stowell, his most intimate friend in the profession, was called to attend him and was in constant attendance upon him until his death. Dr. Stowell immediately recognized the seriousness of Doctor Jackson's condition and called Dr. W. E. Quine in consultation. On the evening of November 3, the attending physicians decided to call in consultation Drs. N. S. Davis Sr. and Henry M. Lyman, that they might fortify their opinion by that of men of national reputation. On November 10, it was decided to ask Drs. Christian Fenger and Archibald Church to see the patient in consultation, but all skill was unavailing to stay the progress of the disease.

Dr. Jackson did not lose consciousness until the evening before he died. He was somnolent, but could always be aroused and would answer questions clearly and intelligently, and he greeted the friends who were allowed to see him in his old, genial, hearty manner. On the morning of November 12 at half past ten he died quietly and peacefully.

The cause of death was cerebral apoplexy due to thrombus, probably of the left middle cerebral artery.

The funeral services were held at the Second Presbyterian Church, Chicago, on November 14 and the interment took place on the following day at Janesville, Wisconsin.

S. C. Stanton, M. D.

Dr. Jackson's works :

1875. Remarks on Intra-Uterine Polypi, with Special Reference to their Diagnosis and Surgical Treatment. *Chicago Medical Journal and Examiner*. 1876. The Ovulation Theory of Menstruation. Will it Stand? *American Journal of Obstetrics*. 1878. Vascular Tumors of the Female Urethra, with the Description of a Speculum Devised to Facilitate their Removal. *Gynecological Transactions*, vol. II. 1879. Laceration of the Cervix Uteri. *Chicago Medical Journal and Examiner*. On Some Points in Connection with the Treatment of Sterility. *Gynecological Transactions*, vol. III. Note on the Use of the Hot Vaginal Douche. *St. Louis Clinical Record*. 1880. Lacerations of the Neck of the Uterus. *American Practitioner*. A Case of Enormous Dilatation of the Stomach, Simulating Ovarian Cystoma and Ascites. *Detroit Lancet*. 1881. Is Craniotomy ever Justifiable? *Chicago Medical Journal and Examiner*. The Present Status of Specialism in the United States. *St. Louis Medical and Surgical Journal*. Uterine Massage as a Means of Treating Certain Forms of

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CORRESPONDENCE.

EMMET'S OPERATION FOR REPAIR OF THE PELVIC FLOOR—A REPLY TO DR. MUNDÉ.

*To the editors of the N. Y. JOURNAL OF GYNÆCOLOGY AND OBSTETRICS.
Gentlemen:*

Dr. PAUL F. MUNDÉ's letter published in your November number accuses me of being "unnecessarily emphatic" in warning my readers against his description of Dr. Emmet's new perineal operation, as given in *Mundé's Minor Surgical Gynecology* and in *Thomas and Mundé's* new work. That there may be no misunderstanding in regard to the operation under consideration, I would say that when speaking of Dr. Emmet's new perineal operation I do not refer to the old clover-leaf or butterfly denudation, that is, the one represented in Dr. Emmet's book, edition 1884, Fig. 71; but I do refer to Fig. 76 of this same work. My reason for speaking emphatically of Dr. Mundé's faulty description of Dr. Emmet's new perineal operation is on account of the weight which any remark of Dr. Mundé always has with the profession, especially as Dr. Mundé is a personal friend, working in the same city and in the same specialty as Dr. Emmet. No one recognizes the marked surgical ability and the conscientious professional fidelity of Dr. Mundé more than myself, but I cannot help but believe that he has never understood the mechanical principles underlying Dr. Emmet's operation. This conviction has been strengthened since the publication of Drs. Thomas and Mundé's new work, for the two plates, 90 and 91, descriptive of this operation, are even more misleading than the figures in Dr. Mundé's *Minor Surgical Gynecology*.

Dr. MUNDÉ's schematic drawing as found in Fig. 285 in Mundé's *Minor Surgical Gynecology* is partially correct. The denudation is not as deep in its antero-posterior measurement as it should be, and the two lower stitches, one upon either side, which are intended to take the place of the crown-stitch, are improperly placed, the upper stitches, four upon either side, are correct, and with a proper introduction of the crown stitch, which I show in my schematic drawing, would correct the error and bring the three landmarks of Emmet together, namely, the crest of the rectocele and the lower caruncle of the hymen, one upon either side. If this schematic drawing under Fig. 285 had been enlarged and properly applied in Fig. 283, Fig. 286

would not have been the result. Fig. 284 is incorrect in every particular. Dr. Mundé admits the fact that he has not been able to close the gaping vulva with this operation, and this fact alone proves that he has not properly applied the principles of the operation to his individual cases.

Dr. MUNDÉ evidently partially understood the schematic principles of this operation when he drew in his *Minor Surgical Gynecology* Fig. 285, but he evidently had forgotten this figure when he published

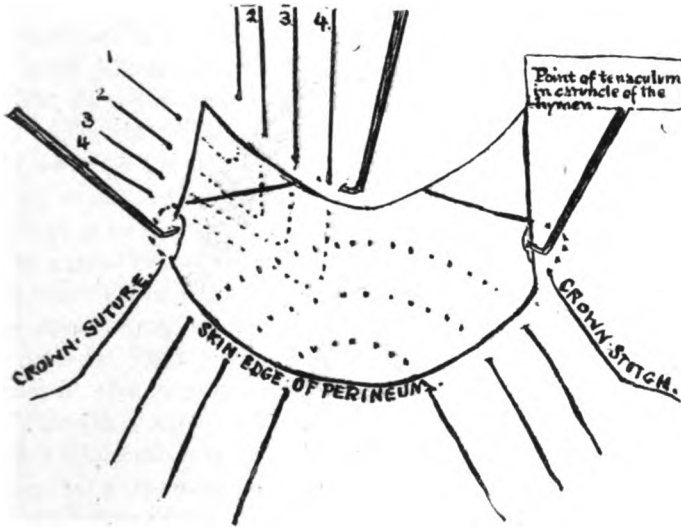


FIG. 1.

Thomas and Mundé, and allowed the plate No. 90 to be introduced representing the passing of sutures, for this plate entirely leaves out the four stitches which were applied in the sulci upon either side, and there is no attempt at a crown-stitch.

Dr. MUNDÉ in his foot-note on page 205, Thomas and Mundé, says that "the fault is probably with the operator," and I most fully agree with him. If he will again take the opportunity of watching Dr. Emmet perform this operation, I am sure that he will be convinced of the ability of this procedure to perfectly restore the perineum, and to "sufficiently close the vulvar orifice."

In speaking of this operation Thomas and Mundé say: "It restores most perfectly the calibre and relations of the posterior vaginal wall, but it leaves the orifice gaping as before, and therefore does not corres-

pond to the requirements of a perfect operation for perineal laceration. It is a beautiful operation for rectocele." As a rectocele is the direct result of the laceration of the posterior wall, I do not see how an operation can be of any utility in curing this condition, which does not restore the muscular power of the posterior wall. The physiological purposes of the perineum is to support the rectum and prevent its pouching forward into the vagina during the straining of defecation, thus forming a rectocele. Now, even if an operation should give a "beautiful



FIG. II.

result" without closing the perineum, it could only be a temporary one, which would soon stretch and leave the patient as bad as before. That such is not the after-result I can bear witness from seeing the results in many of Dr. Emmet's own patients, and from watching the course of a large number of cases upon whom I have performed this operation as Dr. Emmet describes it, during the past eight years.

Dr. MUNDÉ asks how the perineum looks when it is turned wrong side out. My answer is, that if he will make his denudation and set his stitches as they are represented in Thomas and Mundé's Fig. 90, which was the one to which I particularly referred in making this statement, he will have a perfect representation of the condition which I meant to describe, for, as the mucous membrane of the posterior vaginal wall is much more movable than the skin, the mucous mem-

brane will be drawn down to the skin-edge and the vaginal orifice will be made to gape even wider than it did before the operation, opening instead of closing the vagina. I will say that this is not a theory of mine, but the result of my own observation, for not long ago I assisted a gynecological surgeon who performed what he called Dr. Emmet's new perineal operation, setting his stitches exactly as Thomas and Mundé's Fig. 90 represents, and with the result of making the vaginal orifice gape much wider than it did before the operation.

That Dr. Emmet's theory of perineal lacerations, upon which his new operation is founded, is correct, is strengthened by the observations of Dr. Edward Reynolds, of Boston, made at the Boston Lying-In Hospital, during the past five years. In this Institution not less than 1,000 women are confined every year. In Dr. Reynolds' article, which is printed in the Transactions of the American Gynecological Society of 1891, he shows several different varieties of transverse or crescentic tears, and as he says during the past two years, he has not seen a single case of central tear of the posterior wall. That when the skin surface of perineum is torn in the centre line, the tear in the mucous membrane of the posterior vaginal wall will be found to commence in either one or both posterior vaginal sulci. If this statement be true, and my own experience with recent, as well as secondary, tears of the perineum, leads me to fully agree with his observations, then any operation which does not follow the crescentic denudation of Emmet will fail to restore the accurate anatomical relations of the perineum in a large number of cases, and consequently give a less number of perfect cures.

Dr. MUNDÉ says that he feels compelled to submit to the impartial judgment of the profession whether any illustration of Dr. Emmet's new operation show it better than those given in his *Minor Surgical Gynecology*, Figs. 283-286. If Dr. Mundé will submit to the impartial judgment of those members of the profession who understand this operation, I think he will find that they will agree with Dr. Emmet, with the editors of this journal, and with myself, *i. e.*, that the descriptions of this new operation are decidedly incorrect and misleading.

A very good description of Dr. Emmet's new perineal operation has been recently published in a manual of Gynecology for Students and Practitioners, by Bratenahl and Tousey, (Bratenahl of the Vanderbilt Clinic; Tousey of the Out-patient Department of Bellevue Hospital).

A very accurate description of this operation was published by E. C. Dudley of Chicago, some six years ago.

One of the best descriptions of Emmet's perineum that I have ever seen is Dr. Howard Kelly's, published in Mann's *System of Gynecology*.

Dr. MUNDÉ exposes a weak point in my paper on "Procidentia," when he justly criticises my failure to describe this operation, which is certainly one of the most important points in the paper. I felt when writing it that my paper had reached such a length, that the additional time necessary to explain Emmet's operation would simply weary my hearers. I have always felt a temerity in attempting to explain what others have so often failed to make clear; I know that I have often failed to present a lucid description to my class, even when I had a patient upon whom I could make a demonstration: for these reasons, therefore, I omitted the description of this, the best of all perineal operations.

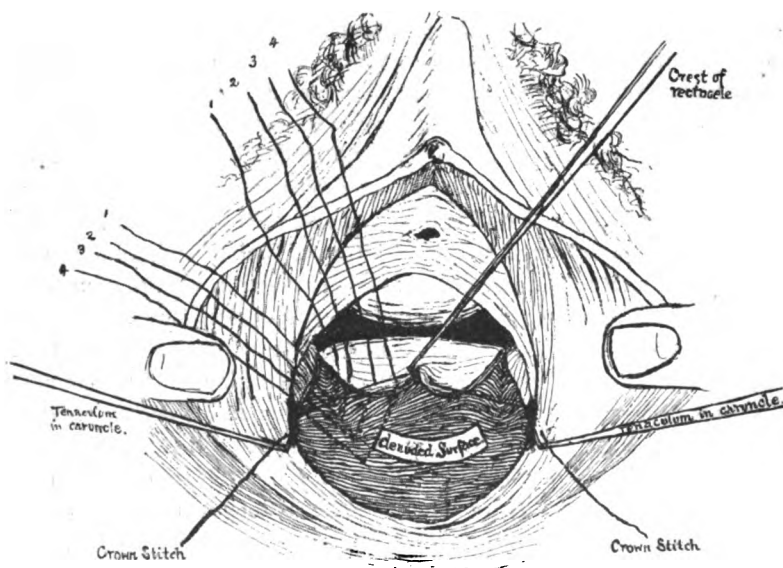


FIG. III.

It has always seemed to me that Emmet's new perineal operation should be perfectly clear to any man who will first accurately locate the three landmarks upon which Emmet lays so great a stress, namely, the crest of the rectocele and the lower caruncle of the hymen upon each side.

My method in operating is to introduce the index finger of the left hand into the rectum, producing a rectocele by pushing the finger up, and raising the rectocele until my finger touches the symphysis pubis. I then, with a tenaculum, pick up the spot at the highest point of the rectocele lying directly below and a little behind the meatus urinarius. Then introduce a tenaculum into the lower caruncle of the hymen, one upon either side, bring these three points together, and notice the three folds of mucous membrane which, if united, would retain these three points in apposition. The three folds thus formed correspond roughly to a Y, as Kelly suggests; the two diverging perpendicular arms of the Y correspond to the two posterior vaginal sulci; the upright or standard of the Y corresponding to the fold upon the skin surface of the perineum running from the fourchette down toward the anus. Emmet describes these two lateral arms of the Y as a crescentic fold, and perhaps it is more accurately so likened. The two arms of the Y, or the two horns of the crescentic fold, which disappears in the posterior vaginal sulci, should, after denudation, be united with short interrupted stitches, each one of which passes slightly downward toward the fourchette, so as to draw the tissue upward and backward, when they are tightened. Each horn is thus sutured with separate interrupted stitches, three or four upon either side. The three landmarks, the two carunculæ and the crest of the rectocele, are brought together with the crown-stitch, which corresponds with the crown-stitch used in the old clover-leaf perineum, the skin-surface of the perineum is then brought together with interrupted stitches. This operation can be readily adapted to any perineal tear, for instance the denudation may be made unilateral, and one horn of the crescent be omitted if the tear exists only upon one side. If the tear extends far down on the skin surface of the perineum the lower or convex line of the denudation may be brought down to the edge of the anus if necessary. When the perineum is operated upon after this manner, the hymen is as nearly as possible restored. The perineum is built up to the hymeneal line as this is its highest point, when the woman lies upon her back, so that the perineum slopes from the line of the hymen back into the vagina, and outward to the skin surface. The gaping vulvar orifice is perfectly closed, and the perineum is anatomically and physiologically restored.

ARCHIBALD McLAREN.

(The Editors wish to apologize to Dr. Mundé for an error which was made by the compositor after the proof of his letter

which appeared in the November number had been finally corrected and left their hands. A paragraph of Dr Mundé's letter was carried out of its place and inserted into a review on the same page.)

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, November 15, 1892.

GEORGE TUCKER HARRISON, M. D., President.

Dr. G. M. EDEBOHLS presented a number of patients to illustrate the results of the method of suture of wounds of the abdominal parietes advocated in his paper of the evening.

Four laparotomy scars varying from five to twenty-five centimeters in length, four cicatrices the result of operations for shortening the round ligaments, and two nephrorrhaphy scars were shown. The ages of the scars varied between four weeks and six months. In all primary union and neat linear cicatrices had been obtained. In such of the patients as were not too stout the knots of the buried silkworm sutures could be plainly felt in the depths of the scars along the entire length of the latter.

The union of the deep parts, the muscles and fascia, as tested by palpation and by having the patients cough in the sitting position was found to be perfect. The majority of the patients had worn no abdominal supporter since operation, yet on coughing there was no bulging of the wound.

A Menstrual Dermato-Neurosis.

Dr. EDEBOHLS also made a second report of this case.

Dr. EDEBOHLS also presented a patient with a *Menstrual Dermatositis of the Face*.

He had already presented the patient to the Society at its meeting of December 15, 1891, and showed her again this evening for the purpose of reporting further upon her case as he had promised to do. The full his-

tory of the patient and description of the rash are recorded in the Transactions of the Society. (NEW YORK JOURNAL GYNÆCOLOGY AND OBSTETRICS, January, 1892, p. 55.) He would not repeat further than to say that from the age of fifteen until presented to the Society at nineteen the girl had suffered at each menstrual epoch—with the exception of an inter-



val of eight months at the age of eighteen—from dysmonorrhœa and the eruption on the right side of the face depicted in the illustration. On December 22, 1891, Dr. Edebohls treated her endometritis and catarrhal salpingitis by dilatation of the cervix, curettage and gauze-drainage of the uterus. The result was an entire disappearance of the dysmonorrhœa and menstrual stigma for three months. Then these troubles reappeared, and again, three months later, Dr. Edebohls discovered small cystomata of both ovaries not present at previous examinations. He performed double ovariectomy and ventro-fixation of the uterus on June 28, 1892. A poly-cyst of the left ovary, ten centimeters in diameter, and one of the right ovary, six centimeters in diameter, were removed. The patient had not menstruated nor suffered any pelvic pain since the operation, six months ago. The dermatosis of the face, however, had reappeared with clock-like regularity once a

month, and, if anything, was rather more pronounced and intense than formerly. On one occasion it even extended around to the left side of the face, the only time it has ever behaved in this way.

Whether the phenomenon is to be regarded as a *molimen menstruale* of the artificial menopause the developments of the near future will show. Dr. Edebohls would attempt to keep track of the patient, and, if successful, would report again, after the lapse of another year, upon the case.

DISCUSSION.

Dr. A. F. CURRIER suggested that this eruption on the face was an angioma, which became congested at each menstrual period, and which still felt the influence of the menstrual molimen, notwithstanding the fact that the ovaries and tubes had been removed. He had had a case under observation for a long time in which there were stigmata recurring each month, but the eruption in his case resembled more that of purpura. The history, however, was very similar to that of the patient before them, viz., the occurrence successively of erythematous vesicles drying up and scaling, and finally a staining of the skin which remained for some time.

Dr. ROBERT T. MORRIS, present by invitation, said that since it is known that severe herpes is sometimes associated with marked heterophoria, a disturbance in the balance of the ocular muscles, he would like to know if such a condition were present in the case presented by Dr. Edebohls.

Dr. EDEBOHLS, in closing, said that he understood that an angioma implied a more or less permanent dilatation and numerical increase of the vessels. Various authors had described similar cutaneous manifestations as eczema impetiginosum. As an artificial menopause had been produced in his patient, he thought it likely that she was now suffering from the vaso-motor disturbances incident to this condition, and that this dermatosis, or vaso-motor neurosis of the skin, would entirely disappear after some time. Acting upon Dr. Morris' suggestion he would have the patient tested for heterophoria.

Uterus Bicornis Unicollis.

Dr. ANDREW F. CURRIER narrated the history of a case of uterus bicornis unicollis, the second which he had seen within three years. The patient was a small anæmic girl, fifteen years of age, living in

Naugatuck, Conn. She had never menstruated regularly, and a year ago the symptoms of obstructed menstruation were so severe that her physician insisted upon a vaginal examination. The vulva was properly formed but there was only a rudimentary vagina. A consultant was called and he succeeded in forcing a passage in the vagina to the extent of an inch when he reached a depression which suggested the possibility that it was the os uteri. Near this point fluctuation was felt, a small trocar was introduced and a quantity of grumous blood was evacuated. The wound was not sufficiently dilated, nor was it irrigated a sufficiently long time, and after awhile it closed up, assisted probably by a diphtheria from which the child suffered last winter, and which was fatal to two members of the household. Since her recovery from diphtheria the child has been anæmic, and eventually became septic and emaciated. For several weeks before I saw her there was an almost constant discharge of dark, very offensive blood from the rudimentary vagina. I was asked to see the child, October 24, in consultation with her physician at Naugatuck. The vagina was not well-formed, in fact the inflammatory process had nearly closed it. I succeeded in tearing open a passage with my forefinger, and at a distance of an inch and a half reached a fairly well-formed vaginal portion of the cervix uteri, much larger than was normal for so small a girl. It was, of course, embedded in inflammatory matter, and I did not attempt to release it. To the left of the cervix was a fluctuating tumor which, however, I could not appreciate through the vagina but only through the rectum. This extended as high as the umbilicus, its upper pole extended to about two inches to the right of the umbilicus, and its lower pole was below the median line. I declined to do an exploratory abdominal section as the child had a shallow pulse running from 150 to 160 and was evidently unprepared for any serious procedure. Instead of this I thrust a small trocar through the lowest point of fluctuation in the rectum, and drew off a quantity of most offensive, thick, yellow pus, and then washed out about a pint of dark offensive blood. The cannula was left in the wound and to it was attached a rubber tube which emerged from the anus and was secured by adhesive plaster to the skin. The child reacted badly for twenty-four hours, and then began to get better; but the tube in the rectum caused the greatest irritation, the rubber portion broke off and whatever drainage there was entered the rectum with no chance for irrigation. I was sent for again, and on the third day from the first operation anæsthetized the child, a second time

succeeded in getting the broken catheter out of the tumor, passed a long sound up into the sac of the tumor, and upon this as a guide succeeded in forcing a trocar through the dense tissue of the vagina, and what I suppose was the left horn of the unclosed bicornate uterus. This opening was made with the greatest difficulty and was enlarged sufficiently to allow of the insertion of two sigmoid catheters. These have served admirably for purposes of irrigation and drainage, and my last reports from the patient, a week or so after the operation, were that she was in quite a normal condition.

Dr. EDEBOHLS asked why Dr. Currier punctured the tumor through the rectum and then, three days later, punctured through the vagina. He considered it bad policy to puncture through the rectum when the vagina or the abdominal parietes were available, as the rectum cannot be properly cleansed, and there was, therefore, always risk of carrying septic material into what might be otherwise a harmless tumor.

Dr. CURRIER replied that there was no other place in which he could puncture, as at first the vagina was a rudimentary structure. After dilating and tearing this portion, with the help of a sound in the tumor as a guide it was possible to make a puncture through the vagina.

A new volsella forceps for use in Trachelorrhaphy was presented by Dr. Currier.

Dr. ANDREW F. CURRIER presented a volsella for use in the performance of trachelorrhaphy. Each jaw was provided with three teeth a quarter of an inch in length, and upon the opposing surfaces of the blades an inch and a half from the jaws was another tooth or spike an eighth of an inch long. The volsella was ten inches long, with handles bent downward, strong steel spring between the blades, ratchet attachment at handles an inch wide, and French lock. When the volsella was closed the jaws were about half an inch apart. On the outer side of the upper blade was also a slot with screw in which a sound could be secured.

The object of the instrument was to facilitate the performance of trachelorrhaphy especially when one did not have the usual number of assistants. The jaws of the instrument were to be closed upon the vaginal portion of the cervix after the wound had been prepared for suturing. The additional tooth in each blade would assist in holding the cervix firmly in position. Abundant counter-pressure was afforded

by the instrument and the tissue was less likely to be torn than when tenacula were used. Bringing the opposite sides of the wound together under pressure would also check the hemorrhage which was sometimes quite annoying when the lips were left open during the passage of the sutures. The apposition of the sides could be made with exactness by this method, and the needle be passed entirely through the organ at one stroke. If there were any uncertainty about the preservation of the uterine canal the sound could be placed in the canal, screwed to the side of the volsella, and its handle removed, thus furnishing the minimum of obstruction.

The instrument is a very strong one and has also been found serviceable in raising tumors of moderate size out of the pelvis. The instrument was made by Mr. J. Campbell.

A Vaginal Irrigating Speculum and Leg-holder was presented by Dr. Edebohls.

Dr. EDEBOHLS presented his improved self-retaining vaginal speculum, an evolution of the instrument he had had the honor to present to the Society at its meeting of February 3, 1891, and which he had described at length in the *Medical Record*, New York, March 7, 1891. The speculum, as now made, was smaller and more portable, while all the essential characteristics of the former instrument were preserved.



FIG. 1.

Uniformity of shape was secured by having it cast, whereas formerly it was hammered out of copper by hand and proved a fit only by mere chance. E. Bocker, 582 Hudson Street, New York, had overcome the

technical difficulties in the way of making a cast, and the instruments as now turned out by him, and by John Reynders & Co., have the advantage of uniform correctness of shape.

Dr. EDEBOHLS *also demonstrated his leg-holders for use in gynæcological operations and examinations.*

They operated upon a principle entirely different from that involved in the use of all other leg-holders of which he had knowledge.

Some leg-holders had no fixed support upon the table, like the well-

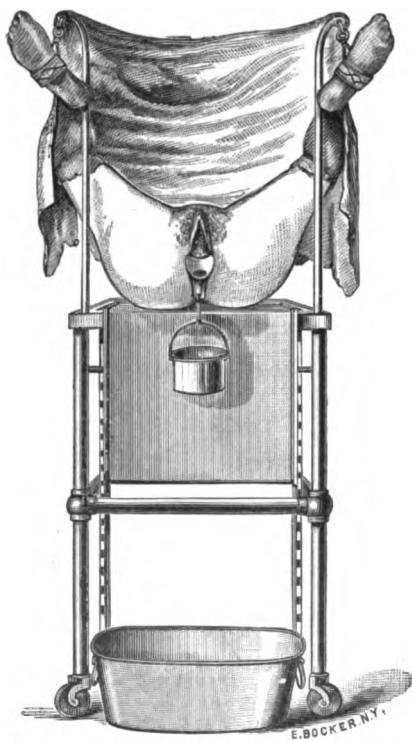


FIG. II.

known Clover's crutch and similar devices, in which the knees were drawn upward and held there by bands or straps passing around the neck of the patient or fastened to the legs at the upper end of the table. Others were connected with the table and supported either the

knee or calf in various ways. In none of them was the foot utilized as the point of support. And yet this suspension of the feet offered advantages to be obtained from no other position.

First of all, it allowed the knees and thighs to gravitate upward and outward in such a way as to relax in the most perfect manner possible the tension of the abdominal walls, an advantage not to be overestimated in the practice of bimanual palpation.

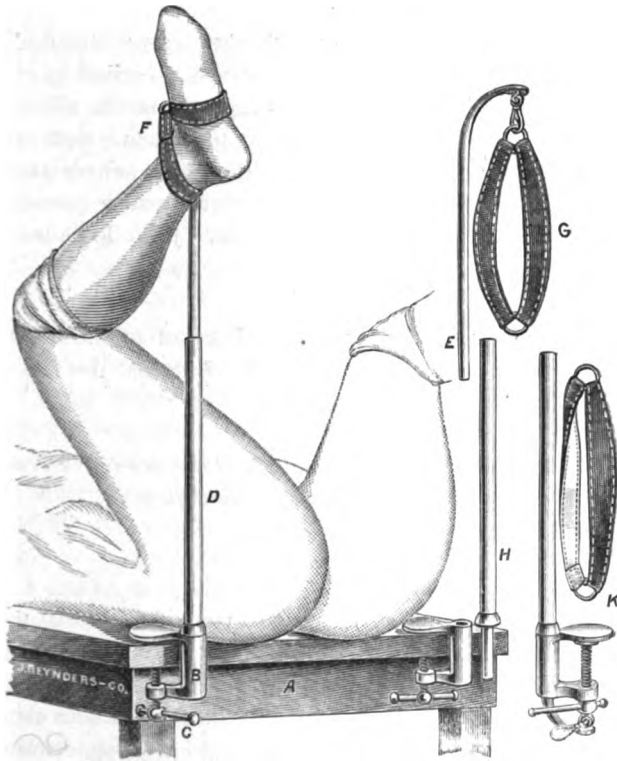


FIG. III.

Secondly, it kept the feet well out of the surgeon's way during the performance of an operation.

Thirdly, it protected the patient's legs from being leaned upon during operation by the assistants, and prevented the post-operative pain and soreness of the limbs due to this cause.

Fourthly, it did away with the constriction of the neck and chest of

the patient, and interference with breathing during anæsthesia, associated with the use of Clover's crutch and like apparatus.

Dr. EDEBOHLS had had his leg-holders in constant use upon his operating table for the past two years with uniform satisfaction. He had found them so valuable an adjunct in the practice of bimanual palpation that he had them attached to the Harvard chair in his office. And finally he had derived a great deal of satisfaction and comfort from a pair of leg-holders which he had designed to meet the requirements of operations at the homes of patients, and which pair he had the honor of presenting this evening. The apparatus consisted of two clamps to be screwed to any table, each of which carried an "upright" made telescopic to reduce length in carrying. From the upper ends of the "uprights" the feet were suspended in the manner depicted in the accompanying cut which renders further description unnecessary. The total weight of the apparatus is two and three-quarter pounds, and it packs fifteen inches long for transportation. John Reynders & Co. are the makers.

Dr. E. B. EDEBOHLS read a report as delegate to the First International Gynæcological Congress at Brussels, in 1892. See page 18.

Dr. G. M. EDEBOHLS read a paper on *The Prevention of Hernia after Incision on the Abdominal Walls*. See page 24.

DISCUSSION.

Dr. ROBERT T. MORRIS said that the plan proposed in the paper was essentially a rational one. He had, himself, never used anything but catgut in abdominal surgery, but he always applied the sutures in three planes, *i. e.*, the peritoneum, the muscular and fibrous structures, and the skin, bringing all like parts together in good apposition. His patients had never worn any abdominal supporters after getting out of bed, yet, in a series of about two hundred cases of laparotomy, he had never met with a single instance of abdominal hernia. After this sort of suturing abdominal supporters certainly would not cause a new deposition of material to act as a barrier against the formation of a hernia. He had only used the buried sutures of silkworm gut in bone-surgery, but he had employed it here quite extensively, and had found it quite unirritating. Where we desire a buried suture, which will remain

where it is placed, silkworm gut is undoubtedly the material to use. The catgut which he had used was the chromic acid gut, prepared by himself according to a method described in the October number of the *Post-Graduate*, and he believed that the reason why he had not met with hernia after abdominal operations was that repair had been completed by the time his patients had been allowed out of bed, usually before the twentieth day. Catgut tied in a square or reef-knot never slips.

Dr. J. DUNCAN EMMET said that he had unfortunately not heard all of the paper, but he took exception to the author's statement against the use of silver wire. Except as regards the difficulty of application and the necessity of removing it afterward, silver wire, in his opinion, was the ideal suture, as, if properly applied so as to avoid constriction of the tissues, it was absolutely non-irritating. When hernia follows the use of the silver wire suture, it is most commonly as a result of abscess; this means simply that sepsis has occurred. Another cause is the failure of the fascial and muscular layers to hold together; in fact, he did not think hernia could occur if the fascia and muscles were held together. In every hernia he had seen, the skin and the peritoneum formed the line of union, the fascia having separated at that point, and he thought this was a very frequent cause of hernia in cases where primary union takes place. In passing the sutures through all the tissues, a sufficient amount of the fascia and muscles is not taken up to keep them together, and the subsequent contraction of the muscles tends to separate the tissues and leave a gaping space through which the peritoneum is pushed outward.

Dr. RUSSELL, assistant at Johns Hopkins University Hospital, said that the custom in the hospital in Baltimore, was to first suture the peritoneum and then the muscles with silkworm gut, and then to use silk for the cutaneous sutures. The majority of their cases had done well, but in two or three instances there had been stitch-abscesses. It was, of course, too soon to report the ultimate result, but he might mention that some of the patients had complained of the irritation produced by the silkworm gut.

Dr. W. R. PRYOR did not see why all cases should be sutured in the particular way described in the paper. In lean subjects there was no difficulty in obtaining primary union, or in properly coaptating the different layers without resort to this method. These silkworm-gut sutures were admittedly foreign bodies, and he knew of cases where, after periods of fifteen months and two years respectively, there was no

evidence of any absorption of the silkworm gut; it does not perish as rapidly even as silver wire. Ballance and Edmunds have made similar and more extended observations in the same line. In women with much adipose tissue, that is, in those most likely to develop ventral hernia, the muscles are usually flabby and the skin tender. He had tried the various methods of suturing, and the introduction of gauze, tubing, etc., as drains between the sutures, but hernia would sometimes follow the use of any of the methods described. One could obtain from the patient herself, however, a bond of union which is not irritating, which is stronger than silkworm gut, and which progressively narrows the incision—he referred to that form of cicatricial tissue which results from the process of granulation in connective tissue and fascia. He preferred, therefore, in fat women, to leave the skin open for granulation; and, contrary to general belief, such a cicatrix does not stretch, but, on the contrary, progressively contracts. Hernia through such a cicatrix seems impossible. He referred to cases in which the hernia, instead of breaking through the scar, made a pocket to one side in perfectly sound tissue. He could not help looking upon these buried sutures as foreign bodies and as irritants, and the fat around them was likely to be broken down at any time by slight violence. Healing by granulation is objected to on account of the slowness of convalescence, but in one case upon which he had operated, and in which the incision was eight inches long and the abdominal fat nearly six inches thick, the wound was entirely healed in eight weeks and this eight-inch incision had already contracted down to three-and-a-half inches, to so great an extent indeed that the skin of the belly had been thrown into lateral folds. The connective tissue so produced is not like that formed from either skin or fat, and is firmer than the silkworm-gut suture and, in fact, than primary union between fat surfaces.

Dr. E. H. GRANDIN said that until he had heard this paper he had made up his mind to dispense with the use of silkworm-gut buried sutures for the reason that his own experience had been different from that of the author. He had buried the silkworm gut in two instances, and in both cases—one a ventral fixation and the other a Cæsarean section—a number of months after operation he had recovered all the deep silkworm-gut sutures which he had used. In each of these cases the sutures had been made as aseptic as possible; they had been boiled for an hour, and they had been handed to him by an assistant whose hands had been properly cleansed, so he was not prepared to grant that the failure in either of these two cases was due to any septic

element. In his opinion, the silkworm gut simply acted as a foreign body. In neither case, however, did the patient suffer any damage, the operations being successful. We should not, however, look upon this suture as innocuous in every case. Personally, he would be inclined to follow the method described by Dr. Morris, of bringing separate layers together with aseptic catgut, and, if this were properly done, he thought Nature would form a cicatrix which would be capable of resisting all tendency to hernia. Where hernia occurs after abdominal section, he believed it was the result of inattention to the proper suturing of the abdominal wall. This criticism was not offered in opposition to the method described in the paper, for this method might prove to be after all the ideal one; but he was disposed to avoid, as far as possible, the leaving of foreign bodies in the tissues.

Dr. CURRIER said this subject was always one of great interest, because the number of hernias following abdominal operations seemed to be on the increase. Years ago a ventral hernia, as a result of mural abscess in connection with an abdominal operation, was an almost unheard-of thing. It was expected that the wound would heal by first intention, and the silver wire was removed and the wound simply secured by straps. It was only since the introduction of new methods of suturing and new suture materials that hernia had become so frequent. After passing a suture of whatever material through the peritoneum, it would be found that, unless it were drawn very tightly, the edges of the peritoneal portion of the wound would gap. This had been his opinion, and within a few days he had put it to the proof in a case in which the abdominal walls were very thick and fat, passing his finger along the peritoneal aspect of the abdominal wound in which sutures had been passed and drawn together, but not yet tied. There was also a tendency of the knot to slip, unless secured by some instrument. This being the case, at any rate in fat subjects, the frequency of the occurrence of abdominal hernia finds its explanation. Individual dexterity also has an important bearing in the matter. He knew that nothing could be more thoroughly aseptic than silver wire, although his own experience with silkworm gut had been very satisfactory, and, unless the tissues had been much bruised during the operation, it was not at all likely to cause irritation. Even in the case to which he referred, in which the tension on the walls was known to be great, on the removal of the sutures he found that there had been no suppuration, although the evidence of strangulation was quite decided. He favored the plan of suturing the abdominal walls in layers, except in very thin

subjects, and, if such a plan were adopted and the suture material were aseptic, everything should be favorable to healing by first intention. As a rule, abdominal supporters after operation did more harm than good, as they soon became stretched, and irritated rather than supported the tissues. He employed a close fitting binder of rubber plaster, placing the layers in close proximity and changing them every week for a period of six months.

Dr. C. A. VON RAMDOHR considered the method of suturing described in the paper an excellent one, but it seemed to him that each of the gentlemen, who had participated in the discussion, had looked upon his favorite method as *the* method. All seemed to agree that, as long as primary union was secured throughout the wound, there was no necessity of wearing an abdominal supporter. He thought, when the abdominal walls were very thin, it was not at all necessary to suture as deeply, and by as many tiers as where there is much fat; but in each and every case, the suture material, whatever its nature, should be absolutely aseptic. Correct apposition, aseptic sewing materials, and the avoidance of excessive tension, are the principal points to be observed, whether the sutures be buried or open.

Dr. E. B. CRAGIN said that the method employed in the Roosevelt Hospital was the introduction of silver wire through all the layers, and then the suturing of the fascia with ordinary catgut. This method had given good results. Regarding the cicatrix formed by the process of granulation, he said that his own experience with such a cicatrix was that it was not as firm as Dr. Pryor would lead us to believe, and that the few herniæ which he had observed had occurred in wounds which had healed by granulation. Where primary union had been secured, there had been only one case of hernia, and that one, he thought, was produced by the breaking of a stitch.

Dr. PRYOR asked if the attempt had been made primarily to secure union by granulation-tissue, or whether the granulation was the result of a suppurative process.

Dr. CRAGIN admitted that the healing was by granulation following mural abscess and not primarily intentional.

Dr. W. M. POLK thought Dr. von Ramdohr had struck the key-note of the situation. His own method was to suture with catgut in layers, and to introduce one deep suture.

Dr. JOSEPH BRETTAUER said that his experience had been limited to the use of silk, and, if this were aseptic, the results should be as good as those obtained with any other suture-material. It is as easily ren-

dered aseptic as silver wire or catgut. In one case upon which he had operated three months ago, the silk was employed in three layers—peritoneum, fascia and skin. After the operation the patient was very restless and partly removed the dressing, and, probably as a result of this, she developed a mural abscess, which necessitated the opening of the entire skin-suture and the draining of the abscess-cavity between the fascia and peritoneum. After two weeks there was very little secretion; the wound healed by granulation, and the cicatrix became particularly firm. He had seen many cases where the suturing had been done in layers, and, although he had never seen silkworm gut used before he came to this country, he had witnessed hernia no more frequently in Europe than here.

Dr. C. C. BARROWS said that the author had referred to the possible result of pregnancy following the operation of ventral fixation; he had recently delivered a woman upon whom he had done ventral fixation three years before, using silk sutures which included the peritoneum, fascia and muscles. At the time of delivery, examination showed the uterus apparently not at all adherent to the abdominal wall.

Dr. GRANDIN asked if Dr. Edebohls thought it not advisable to bring into apposition homogeneous structures, as he understood from the paper that he was not particular about bringing like structures together.

Dr. EDEBOHLS, in closing the discussion, said he considered it senseless to advocate any other procedure than the apposition of like structures in closing wounds. In one loop of silkworm gut he included fascia, muscle and peritoneum, taking great care to secure perfect apposition of each layer, and using, if necessary for this purpose, a few extra fascial sutures. As the muscular tissue is constantly contracting, muscular union is necessarily not as firm as that of fibrous tissue. He had tried every single method of suturing which had been proposed in the course of the discussion; he had sewn in tiers; he had sewn the peritoneum, muscle, fascia and skin separately, and had used all the various sutures mentioned, except silver wire. He had not used the latter for nearly four years past, because he thought in silkworm gut he had a more pliable and equally aseptic material. He had had, occasionally, opportunity of making post-mortem examinations within a few days after laparotomy, and he had frequently found that, where he had used interrupted sutures of catgut or of kangaroo tendon, the knots had opened, and for this reason he did not approve of Dr. Morris' plan of using buried catgut sutures. Although catgut would resist absorption

for varying periods of time, depending on the mode of preparation, we could never feel certain that the knots would hold, and it was not permanent; hence he preferred silkworm gut. All those who had participated in the discussion had founded their remarks on one assumption which seemed to him incorrect, viz., that when once primary union of the abdominal walls had been secured, it was permanent. One may have such union existing for a period of three weeks, with accurate approximation of peritoneum, fibrous tissue and muscles; but, as a result, possibly, of some unusual exertion, this line of union may separate and constitute the beginning of a hernia. Authors vary greatly in their conception and definition of ventral hernia. Whenever, after a laparotomy, he found a separation of the muscles and fascia in the line of incision, even if no tumor were present, he booked that patient as having hernia, for at any time there is a liability to the sudden development of a hernial tumor. Some authors only speak of a ventral hernia when a visible hernial tumor is actually present. Of course, he desired to obtain primary union, but in addition thereto he wished to retain this union, and, for this reason, he used buried silkworm-gut sutures; as far as known, they remain unabsorbed and in exactly the position in which they were placed, as shown in the patients which he had presented. It was not always easy to procure good silkworm gut. It is found in the market in bundles of one hundred strands each, the price varying from thirty-five cents to three dollars-and-a-half per bundle, and the quality usually varying in proportion to the price. The thickness, regularity, and smoothness of the gut, but particularly its thickness, are the points which guide one in selecting it. He usually obtained his supply from wholesale dealers in fishing-tackle; the instrument-makers not finding it profitable to keep the best grades. Where it is difficult to estimate the thickness of each strand separately, one can judge very well by comparing the sizes of different bundles, each bundle containing one hundred strands. The silkworm gut which he was accustomed to use costs from one dollar-and-a-half to three-and-a-half a bundle, the market price being subject to considerable fluctuations. Out of about four hundred buried silkworm sutures he had had only two ulcerate through, and these as the result of *trauma*. This he considered pretty good evidence of their permanence. In one case silk sutures were also used and these all ulcerated out, yet, in spite of the ulcerative process, every single silkworm-gut suture remained. As both had been boiled just previous to operation, this would seem to indicate that asepsis is more easily obtained with silkworm gut than with silk; in fact, silkworm gut

is just as aseptic as silver wire, and is free from the defects of the latter. To quote the words of Dr. Marcy, of Boston; "The suture should be aseptic, and be buried aseptically, in aseptic tissues." He hoped in another year, to be able to report still further on this subject.

Dr. PRYOR said that silkworm gut of the proper thickness corresponds very nearly to No. 25 silver wire.

Dr. MORRIS remarked that the proper quality of silkworm gut was known to fishermen, and to the trade, as "salmon-gut."

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

Fifth Annual Meeting Held in Louisville, Kentucky, November 15, 16, and 17, 1892.

An Address of Welcome was delivered by *Dr. L. S. McMurtry*, of Louisville, Chairman of the Committee of Arrangements, the response to which was made by the President.

Experiences in Pelvic Surgery.

This was the title of a paper read by *Dr. A. V. L. Brokaw*, of St. Louis, Mo. The speaker knew of no surgical work which will compare in difficulties with the experience found in the pelvis; a diversity of conditions, complications and unexpected happenings are ever presenting. In a series of many operations but few will be alike in every particular. As his experience became larger he was free to confess his inability to correctly diagnose the character of abdominal and pelvic troubles. He had diagnosed pus-tubes and found extra-uterine pregnancy; diagnosed extra-uterine pregnancy and found pus; diagnosed ovarian lesions and found the trouble located in the tubes and *vice versa*. When well-defined pelvic lesions exist, nothing short of radical measures

succeed. The one condition above all others where exploratory incision should be adopted was in cases of suspected extra-uterine pregnancy. It was correct and good surgery to open the abdomen and not wait for all the classical signs to appear. The symptoms of extra-uterine pregnancy were so frequently obscure and unreliable, that he was firmly convinced a radical position should be taken. A case was cited in point.

Dr. WILLIAM WARREN POTTER, of Buffalo, endorsed that portion of the paper pertaining to an early exploratory incision in cases of suspected extra-uterine pregnancy. As regards the use of the sound, he had brought an indictment against it some six or eight years ago, consequently he would not expatiate upon it at this time.

Dr. JOSEPH TABER JOHNSON, of Washington, said that as soon as the surgeon diagnosed something in the abdominal cavity that ought not to be there, anatomically or physiologically, and was histologically wrong, it should be removed. An exploratory operation was justifiable in cases of suspected extra-uterine pregnancy, and the surgeon should base his further procedures upon what he finds after making the exploration.

Dr. W. E. B. DAVIS, of Birmingham, Alabama, thought the pendulum relative to surgical interference had swung a little too far. He believed that a great many of the so-called "tinkers," who succeeded in relieving their patients, did not accomplish it so much by the local treatment they used as by having patients under their care, keeping the bowels open, giving constitutional treatment, seeing them regularly, etc. While, by so doing, they might not be cured in all cases, they were greatly benefitted. Regarding the diagnosis, surgeons who were opening the abdomen constantly would rarely give a positive diagnosis in the case. Dr. Davis cited the case of a woman who had an acute attack of peritonitis, and the history was the same as from pelvic abscess.

Dr. BROKAW, in closing the discussion, said that in every case of suspected extra-uterine pregnancy it was good surgery to make an exploratory incision and operate before rupture took place.

Dr. CORNELIUS KOLLOCK, of Cheraw, S. C., read a paper on "*Craniotomy upon the Living Fœtus is not Justifiable.*" (See page 29.)

Dr. W. D. HAGGARD, of Nashville, emphasized the position taken by Dr. Kollock. He believes that when the profession fully realizes the immense difference in the number of lives saved by Cæsarean section

over craniotomy, there will be no doubt as to its preference to the latter operation.

Dr. HUNTER MCGUIRE, of Richmond, favored Cæsarean section. Some time ago he saw the report of a case by Dr. Thomas, of New York, where, in doing Cæsarean section, he proposed to take the uterus out of the cavity, and then open it. He thought this added very much to the danger of the operation, necessitating a larger opening, exposing the cavity of the abdomen a long time to the atmosphere, etc. He does not favor this procedure.

Dr. L. S. MCMURTRY, of Louisville, said that a few years ago it would have been impossible for one to have presented the views that Dr. Kollock had without meeting with violent opposition. Cæsarean section was then regarded as an extremely heroic operation, and until recent years the mortality therefrom was very great; but since it has been carried to the present degree of perfection by Sænger and others it has strengthened the opinions of abdominal surgeons, who now consider it preferable to craniotomy. Within the last two months symphysiotomy had been brought before the profession and practised as an alternative in certain cases of Cæsarean section. What the future of the former operation is to be we were not prepared to say.

Dr. ARCH DIXON, of Henderson, Kentucky, had advised Cæsarean section in a case which he had seen in consultation, but the family physician insisted upon his doing craniotomy. This was done, and while every precaution was taken with regard to rendering aseptic the field of operation, the woman developed pelvic peritonitis and died within four days. He believed a Porro operation would have saved the life of the woman and perhaps that of the child.

Dr. W. D. HAGGARD, of Nashville, read a paper entitled "*A Case of Extensive Hematocoele Resulting From Tubal Pregnancy Rupturing into the Broad Ligament.*" Although the fœtus was not found, that it was a case of tubal pregnancy with rupture into the broad ligament is clearly established by the clinical history and post-mortem appearances, summarized as follows: (1) Patient confessed having had intra-pelvic trouble previously (presumably gonorrhœa), for which she was treated locally, (2) At the time of the accident, caused by jumping from a wagon, her menses were past due. As to how long, her statements were misleading. (3) There was a fitful yet persistent bloody flow from the uterus during her entire illness. (4) Paroxysmal, colicky pains in lower abdominal and pelvic regions of frequent occurrence. (5) Existence of a tumor above the pubes, which she probably

mistook for a gravid uterus. (6) Persistent refusal to submit to a digital examination, probably fearing the detection of her pregnant state.

Post-mortem Appearances.—(a) Enlarged and softened condition of the uterus with a patulous os, showing escape of a sero-sanguineous, stringy fluid. (b) Enlargement of the left tube with a well-defined cavity from which the fruit-sac escaped. (c) Existence of a deciduous membrane, as revealed by the microscope. (d) Discoloration of rectum, produced by blood-dissection around it, producing constriction and partial death.

Dr. S. M. HOGAN of Union Springs, Alabama, reported a case of "*Fibroid Tumor of the Uterus; Pregnancy; Rupture About the Fourth Month; Operation; Specimen.*" The woman, colored, was 28 years of age, and from the symptoms and history of the case, he was satisfied there was a rupture and the probabilities were that it was about the fourth month of gestation. He was also of the opinion that the rupture did not destroy the foetus, that it continued to grow in its abnormal position. The speaker felt sure that if he had operated on the case immediately after rupture, the patient's life would have been saved. In all cases of rupture he would advise Porro's operation to be done immediately; that in all cases, where the tumor is large or multiple, intramural or subperitoneal, with a sacciform dilatation of the posterior segment of the uterus, and the os above the pubic bone, or inaccessible, the same operation should be done. In all cases where the tumor is in front of the child, or blocking the passage, it should be done, provided the pregnancy has advanced to the full time, or there should be a hemorrhage, or rupture of the membranes, indicating that an abortion or miscarriage is imminent.

Dr. H. HORACE GRANT, of Louisville, contributed a paper on "*Intestinal Anastomosis by a New Device.*"

For more than a year the speaker has been endeavoring to perfect some instrument to simplify suture, but it has been so difficult to get just what he wanted, that time has not been allowed since the completion of the instrument to test it fully. It is to be only used after resections. The two blades of the clamp are oval scissors, one-fourth of an inch in transverse and two-and-a-half inches in longitudinal diameter. The arms of the clamp are made long enough to allow the introduction full five inches. After the gut is exposed, a strand of iodoform-

gauze is passed through the mesentery and constricts the intestines fully six inches from each point of intended resection. The mesentery is tied off over the portion to be resected with fine silk, in two-inch loops, cut close and dropped in the usual way. When the resected portion is removed the gut ends may be washed out if desired. While the two ends of the divided intestine are held parallel, one blade is entered in each, allowing at least one-and-one-half inch of gut beyond the proposed anastomotic opening to permit of invagination of the ends. The clamp is tightened and the two surfaces thus firmly held are rapidly stitched together by a continuous overhand Lembert suture of fine silk. Two rows of parallel sutures as suggested by Abbe may be used if desired, though it has seemed that one is enough according to the author's experiments. The work can be done far more rapidly and accurately than without the clamp. When the suturing is finished the clamp is tightened if need be, and a long bladed dressing-forceps passed in the bowel and the oval plug removed or pushed in. The scissors-action of the blades, together with the ten or fifteen minutes pressure prevents any hemorrhage. The clamp is now withdrawn and the ends invaginated in the usual way.

Dr. A. V. L. BROKAW, of St. Louis, thought the instrument exhibited by Dr. Grant a good one, and said that anything which materially assists the surgeon in making intestinal anastomotic operations rapidly was of great value, that time was a most important element. The use of rings, plates and mats in the past were bad. He believes that we can suture far more rapidly with Dr. Grant's instrument than any other device he has thus far seen.

Dr. W. E. B. DAVIS, of Birmingham, Ala., believed a large number of operators had abolished mechanical devices in doing intestinal anastomosis. His brother, Dr. John S. Davis, had devised a rubber plate and mat, but now prefers not to use the plate. In the case of restriction of the bowel, he thought the device of Dr. Grant was an ingenious one, inasmuch as it would facilitate the work of the surgeon and enable him to do an operation very quickly. He had conducted a series of experiments in an effort to do away with mechanical devices, by which surgeons might use the end-to-end operation by splitting up the bowel. While the operation was successful in some cases, the strain on the circulation was too great, and he now condemns the operation.

Dr. FRANK G. LYDSTON, of Chicago, directed attention to Dr. J. B. Murphy's anastomosis button, a recent device by which he says cholecysto-enterostomies can be done in from eight to twelve minutes.

Dr. CHARLES A. L. REED, of Cincinnati, Ohio, read a paper entitled
Surgery of the Ureters with a Report of Cases.

He said that surgery of the ureter is one of the developmental subjects of abdominal surgery. These out-of-the-way conduits exercising functions that are vital in character are liable to diseased conditions which baffle the resources of the diagnostician and tax the ingenuity of the operator. For purposes of diagnosis the physical means at our command may be briefly summarized as follows; (1) Exploration of the lower end of the ureter by digital examination, (a) through the vagina, (b) the rectum, and (c) the bladder; (2) exploration of the lower end of the ureters by the sound passed through the urethra and bladder into the ureters; (3) exploration of the central portion of the ureters by abdomino-lumbar palpitation—an expedient of practical value only in cases of extreme ureteral distension occurring in very thin subjects; (4) exploration of the upper end of the ureters by exploratory nephrotomy. Each of these several expedients might be amplified. Dr. Reed said that since catheterization of the ureters has been popularized in this country chiefly through Kelly, and since the technique of the procedure has become understood by those who have studied it, the diagnosis of disease within and surrounding these tubes is vastly more common. The digital exploration of that portion of the ureters lying within easy reach from the vagina or rectum is readily practiced by those who have carefully studied the anatomy of the parts. Digital exploration through urethra and bladder is an easy expedient so far as the surgeon is concerned and often leads to the elucidation of important pathological facts, but the speaker is forced to believe that it is not without danger to the patient. He has been forced into this belief by one case of incontinence lasting for nearly a year and by two cases of weakened power of retention, one of which is now of quite two years standing. He said that abdominal section for diagnosis of ureteral conditions, notably in cases of suspected calculus, is entirely justifiable. He then reported a case of peri-ureteritis, stricture, kolpo-cysto-ureterotomy, with recovery. The second case was one of cicatricial stricture of an excised ureter, hydro-nephrosis, nephrectomy, with recovery. The third case was one of pyo-nephrosis, nephrectomy, remaining ureteral disease.

Dr. WILLIAM POTTER, of Buffalo, read a paper entitled, "*Specialism in Medicine Particularly as Related to Surgery and Gynecology.*"

Dr. R. M. CUNNINGHAM, of Birmingham, Ala., followed with a

paper entitled "The General Practitioner as a Gynæcologist." He said the general practitioner should not undertake work that can be better and more safely done by the specialist, provided one is obtainable. He should be willing to do and attempt the most radical and dangerous operations when necessary to save life, provided a specialist or one better prepared to do the work cannot be obtained. In cases not necessarily dangerous, or in which life does not become more or less a burden, but in which a cure can be effected only by a radical procedure, but which may be materially benefited, or symptomatically relieved by milder methods, he should adopt the latter and not the former. In many cases the field is clearly his own, belongs to him, and he should be prepared and competent to treat them with safety and success.

Second Day—Morning Session.

Dr. HOWARD A. KELLY, of Baltimore, read a paper entitled "*A Preliminary Report on the Morphology of Ovarian and Myomatous Tumors.*" This paper will appear in the next number of the JOURNAL.

"*Umbilical and Ventral Hernia,*" was the title of a paper read by Dr. William H. Wathen, of Louisville, Kentucky. He confined his remarks mostly to the preventive and curative treatment of ventral hernia following laparotomy and the treatment of umbilical hernia. He said there are many cases of ventral hernia that could have been prevented had the proper treatment been carried out in the closure of the abdominal wound. In order that there may be no hernia following laparotomy, it is necessary to get perfect union by adhesion of all the layers of tissue forming the abdominal wall—the peritoneum, muscles, the deep and superficial fascia, and the skin. But especially must we get union of the layers of fascia for unless this be done the other layers will gradually separate and hernia will follow. This cannot be done unless we succeed in bringing the cut edges of the fascia in even and perfect apposition long enough for strong union to occur. This is impossible if there is suppuration in the wound, and is generally impossible unless the several layers of tissue be separately united by the buried suture. In operations for large tumors where the abdominal walls are relaxed so that there is no tension upon the wound all the layers may be evenly and perfectly brought together, and good results

may follow by uniting the wound with uninterrupted sutures carried through the entire thickness of the abdominal walls. But in four fifths of the operations that are now done these conditions do not exist, and there is necessarily more or less tension immediately upon the wound. Hence, we have no assurance that the several layers are brought into apposition except it be done by separate union with buried sutures. Some operators claim that they have not had hernia following laparotomies, and that they have sutured the abdomen after almost any fashion that at the time suggested itself to them, but if these men would look more carefully into the subsequent history of their cases they would find that hernia is more frequent than they had supposed. He did not believe in his earlier laparotomy work that hernia would follow his operations, and was very bold in asserting that he had no hernia complications, but he now finds that he had, and in some of the cases where immediate conditions were apparently the most favorable and permanent. Of course, until recently, the buried suture could not be used because of the imperfect knowledge of the best means to protect the wound against infection. This objection having been practically overcome, most any suture may now be buried in tissues, if properly introduced, and will not cause suppuration. It is necessary to introduce an aseptic suture in aseptic tissue and exclude it from the atmosphere. There is precaution, however, in addition to perfect cleanliness, that must always be observed in the use of the buried suture, otherwise we may have suppuration. It is next to impossible to do any operation that is absolutely aseptic as there may be a few bacterial spores in the wound or upon the suture, but these are readily taken care of and destroyed by the cellular elements unless the power of resistance is impaired, and conditions favorable to their development are furnished. If the sutures are drawn too tightly in all the layers, or at any point, the normal blood and nerve supply to the part will be interfered with, the resisting powers to bacterial development weakened, and suppuration may result. In his former operations with the buried suture this difficulty was annoying, and he now buries the suture and does not expect to have suppuration follow. He has several cases now in the Infirmary recovering from laparotomy, where the incision was closed with the buried sutures; union is perfect and the tissues about the wound are nearly as soft as the other parts of the abdomen. He prefers the kangaroo tendon because it is very easily made and kept aseptic and holds its integrity long enough to insure perfect union of the surfaces. He does not consider catgut so reliable unless it is prepared by some person

practically familiar with the best methods of disinfection, and even then there is danger of too rapid absorption unless it has been chromicized.

Dr. WILLIAM H. MEYERS, of Fort Wayne, Indiana, read a paper entitled "*The Treatment of Tubercular Peritonitis*," in which he said that in the year 1821 Drs. Graves and Stokes of Dublin first directed attention to the use of opium in the treatment of peritonitis. Afterward, under the teachings of Dr. Clark, it assumed considerable permanence and predominated over all other treatment and was regarded as curative. This period constitutes the opium habit of the profession. At present we have a progressive invasion by the surgeon of this once purely medical region. Inertia in the profession is passing away. Professors and authors are no longer followed by us with a punctuality equaled only by the old order of monks, about penance and absolution. We are just now emerging from the doctrines of the living ancients, that opium, alcohol and liquor diet is the treatment for peritonitis, whatever its cause, and whether it be general, circumscribed, septicæmic, or tubercular. If there be those present who endorse this treatment under all conditions, then he could only say, "God hath not justly dealt by them;" for a correct diagnosis with a correct apprehension of the etiology of each case must suggest a different line of treatment from that mentioned. We assert that it is only through a perfect diagnosis that we can see when and how therapeutical or surgical measures must be attempted. Upon this all correct treatment must depend. It is also of primary importance that the etiology be definitely settled at the earliest moment. When we have arrived at the conclusion that peritonitis is present, and have discovered the cause, the blow must be struck simultaneously with the onset. No delay can safely be tolerated, the only hope of rescue being the sudden arrest of the disease. By the time that the normal outlines of the abdomen are obscured by tympanitic distension, respiration quickened and shallow, the pulse rapid and wiry, the supreme moment for precise diagnosis is passed. Abdominal section for tubercular peritonitis was the most recent triumph of surgery. Dr. Myers had treated three cases of tubercular peritonitis by abdominal section, washing out the abdominal cavity with drainage, with complete recovery.

Dr. JOS. TABER JOHNSON, of Washington, D.C., read a paper entitled "*Ovariectomy in Old Women*." He remarked that not many years ago a patient of sixty years of age was considered too old to undergo the operation of ovariectomy but the more rapid methods of

operation and more careful attention paid to the lessening of shock have made the procedure in these cases safer and more successful. In the three cases which he had to report, he was quite sure prolonged anæsthesia and manipulation within the peritoneal cavity would have proved fatal.

CASE 1. In November, 1887, a lady aged sixty-seven, was sent to his service in Providence Hospital, by Dr. W. D. Hughes, with a very large abdominal tumor, which had been diagnosed and treated for everything else but a cyst of the ovary. She came in a wagon in a recumbent position, and was in such a bad condition, that her friends expected her to die. In their sad adieux they gave her to understand that they were seeing her for the last time in this world. The Consulting Staff gave him a reluctant consent to operate, thinking that she would die anyway, and the operation would do little harm. He got her in as good condition as possible, provided all known means of resuscitation and operated. Fortunately there were few adhesions; the tumor weighed fifty-two pounds, and was one-third solid. The incision was unusually long, but was quickly made, the cyst tapped, delivered, the pedicle quickly ligated, and the patient taken back to bed in less than half an hour. Rectal enemata of hot beef-tea and whiskey were given at once and repeated several times during the day. There was little shock and the plucky old lady made an unusually rapid recovery. She was alive and doing well, when last heard from.

CASE 2. In September, 1889, Dr. Lincoln, of Washington, requested him to see an old lady with him, who had been tapped several times, and whose physicians had informed her that she was too old and feeble to stand another tapping, and nothing more could be done. She had been told from the first that she was too old to withstand the effects of an operation, that medical science could only afford temporary relief by drawing off the fluid. The tumor was never half emptied and rapidly refilled. Dr. Lincoln was requested to take charge of her as a general surgeon. He made a correct diagnosis of multilocular ovarian tumor, and requested Dr. Johnson to operate. She was not in condition to be taken to his private hospital, and he consequently operated in her two rooms. The tumor weighed sixty-four pounds. The patient was 68 years of age. She made a good though rather slow recovery, and is to-day holding the position of matron to the hospital of the Soldiers Home, at Hampton, Virginia. On October 10th of this year, about six weeks ago, he removed an ovarian tumour, weighing 46 pounds, from a lady in his private Sana-

tarium, who was sixty-seven years old, but who looked to be a hundred. This tumor had been tapped nine times in the last eighteen months, and fully four hundred pounds of fluid drawn away. Improved methods, quicker operations, antiseptic technique and provisions against shock, he said, show thirty-eight recent cases between the ages of sixty-seven and eighty-two, with only two deaths against twenty-four cases, done twenty years ago, between the ages of sixty and sixty-seven with a record of six deaths. These figures demonstrate in addition to improved technique the surprising fact that old age is no contra-indication against ovariectomy. Indeed, they seem to have endured the strain and shock equally well if not better than an equal number of younger women.

Dr. BEDFORD BROWN, of Alexandria, Va., read a paper entitled "*The Simple, Septic, Traumatic and Specific Forms of Cervicitis and Their Treatment.*" Simple cervicitis arises alone from simple causes. It never originates from infection of any kind. It could exist for an indefinite period without infecting surrounding structures. For many years the author in the treatment of this affection has addressed his remedies to the interior of the cervical canal alone, whether he used nitrate of silver, sulphate of copper, carbolic acid or iodine. Septic cervicitis arises always from septic infection of the pelvic structures connected with the lymphatic communication. Contact with the os of portions of putrescent placenta, membranes, coagula or septic discharges from diseased uteri were the common causes. Antiseptic measures alone could counteract septic infection and inflammation, whether in the form of septicæmic fever or local inflammatory action.

All other agencies were simply palliative or adjuvant in character. Traumatic cervicitis was simply inflammation and congestion of the cervix from wounds inflicted on that body either during labor, abortion or from the use of dilating instruments. The author treats this form of cervicitis by means of a solution of nitrate of silver, varying in strength from a scruple to half a drachm applied in the canal and over the entire cervix. He finds most of his cases of open and all cases of concealed wounds heal by this method. Specific cervicitis may arise either from gonorrhœal or syphilitic infection. In the early stages he resorts to douches containing peroxide of hydrogen in the proportion of one part to three-fourths of boiled water, and also permanganate of potash, one grain to the ounce of water.

"*A Manipulative Mistake and its Consequences.*"—This paper was lead by Dr. George Ross, of Richmond, Va. The author related the

case of a woman who had suffered from unremitting, agonizing tenesmus the result of a mass which she carried for seven years in her bladder, and which proved to be on inspection a pledget of absorbent cotton *once* saturated with iodine, in shape a truncated cone, and thinly incrustated with phosphate of lime. The patient believed it was introduced by her first physician, who, when attempting to apply an intra-uterine dressing, mistook the urethra for the cervical canal.

The following officers were elected :

President.—Dr. Bedford Brown of Alexandria, Va.

First Vice-President.—Dr. Jos. Price, of Philadelphia.

Second Vice-President.—Dr. Geo. A. Baxter, of Chattanooga.

Secretary.—W. E. B. Davis, of Birmingham.

Treasurer.—Dr. Hardin P. Cochrane, of Birmingham.

Place of Meeting.—New Orleans, La.

Time.—Second Tuesday in November, 1893.

Chairman of Committee of Arrangements.—Dr. Albert Miles.

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Abstract of meeting, November, 1892.

THE first paper, a case of twin pregnancy complicated by a large myoma, was presented by Dr. William S. Taylor. It was the subsequent history, with detail of operation, of a patient from whom in 1888, Dr. Taylor removed a large fibroid. The woman when seen by him was advanced in the pregnant state and complained of severe abdominal pain. She had high and weak pulse, irritable stomach and bladder, and diarrhœa. In the right iliac region was found a mass the size of a small cocoa-nut. The condition pointed to an extra-uterine pregnancy. Laparotomy was done and the peritoneum opened. Two large tumors presented; one proved to be the new growth, and the other a pregnant uterus. The myoma was removed and abdomen closed. Subsequently the woman aborted and was delivered of a four-month child. A few days later a second child was delivered. She afterward suffered from phlegmesia dolens, but recovered. Later she became pregnant and up to the present time has given birth to two healthy children.

Dr. BENTON C. HURST, in the discussion on the above paper, said it was a decidedly bloody operation due to the size of the attachment and also that the abortion was not due to the operation. One of the infants was badly macerated and the termination of the pregnancy due to the death of the fœtus previous to the operation.

Dr. MORDECAI PRICE read a paper on *Hard Growths of the Uterus*. The many and varied forms of necrosis of this class in the uterus, although they may seem to have arisen from altogether different sources, have their beginning generally if not always in fibroid changes.

These tumors are of low vitality easily taking on malignant forms and suddenly after years of rest, as pure fibroids, assume a malignant type and rapidly grow, complicating an operation for removal, on account of its size or involvement of surrounding organs. In the true fibroma there is but little muscular tissue and the capsule contains all the connective tissue of which there is but little. In the myomatous growths, the blood-supply is found everywhere throughout the tumor and is ever increasing. The muscular element is easily found and the nature of the enlargement is more uniform. The growth is more rapid than the fibroma. Entire involvement of the uterus is rare in this class of tumors, that is, they are more apt to be diffused and not occupy more than one side of the uterus. The nodular variety being, in most instances, in the muscular tissue travels either into the cavity or toward the peritoneum generally in the line of the least resistance and as a rule are not single. Out of six cases operated on four were undergoing sarcomatous changes.

"A Large Collection of Pus Between the Layers of the Broad Ligament Complicating Pregnancy." In this paper B. C. Hurst, M.D., described a very peculiar condition, where in the layers of the broad ligament existed a cystic tumor containing about two quarts of pus, which was evacuated after a median abdominal incision. The sac being sewed to the abdominal wall, drainage was thus procured.

In the discussion the point was raised as to the real source of the pus, and the term "suppurating broad-ligament tumor" was suggested as applying more to the supposed condition. The existence of abscesses in the broad ligament have been known to occur after labor. In the beginning the majority of pelvic troubles, about ninety per cent., are inter-peritoneal. So in the subsequent inflammation, which converts them into other forms by building up a wall of protective lymph. Dr. M. Price in two thousand cases of abdominal section has yet to see a

single case of abscess of the broad ligament. Dr. S. Price says he has never known a parovarian cyst to suppurate. They contain a fluid, the purest form removed from the abdominal cavity, and the kind least likely to change. In regard to the case reported, his impression led him to believe it possible to remove the cyst, and that the time will come when it will have to be done. Extra-ligamentary cysts Dr. Price has not seen, and when they do occur, as occur they will wherever there is cellular tissues, it is due in the pelvis to traumatism or secondary burrowing.

"*Chronic Abscesses Due to Appendicitis*," by F. M. Baldy. A woman, two years previously, had first noticed a small lump in the inguinal region, and under the supposition it was a hernia had ever since worn a truss. Dr. Baldy found a lump, about the size of a large foetal head, which had been growing rapidly since the first of the year. Its general appearance and pus, together with its growth, led him to suspect sarcoma. An attempt being made at enucleating it, pus was found and the cavity dropped down in the region of the head of the cæcum, the first cavity being between the skin and muscles. The woman subsequently gave a clearer history which proved the existence at one time of an attack of appendicitis. Another paper by the same writer considered a case of "*Malignant Peritoneal Cysts*." In this case there existed what appeared to be a parovarian cyst. The uterus and ovaries could be descried, and the growth appeared to have no adhesions. On section, the cyst was found densely adherent to the peritoneum, and the hand was passed around back through what appeared to be adhesions until the great vessels at the back were reached. In working around, no intestines having been seen, the finger suddenly entered the cyst, which discharged about two gallons of dark fluid. The interior of the cyst was soft and velvety, and covered with small nodules of a tubercular or malignant nature. Through the posterior wall could be seen the intestines clearly adherent so that it was impossible to remove the cyst. The abdominal contents were inclosed within the cyst-wall and covered with the same growths as that of the cyst-wall. The ovaries and uterus were intact. The ovaries, however, presented a condition of cystic degeneration, and had papillomatous masses growing from them. Recovery was prompt and satisfactory. The ultimate outcome of the case was not given. The only explanation given by the writer was of an anomalous distribution of the peritoneum, which later took on malignant changes.

TRANSACTIONS OF THE PHILADELPHIA OBSTETRICAL SOCIETY.

Abstract of Meeting, Dec. 1st, '92.

Dr. W. PRICE gave a paper on a case of *appendicitis* in a woman who had been treated for liver trouble. Examination revealed the existence of a symmetrical tumor filling the lower abdomen. This ruptured into the bowel, and the woman had a period of comparative ease. When seen by Dr. Price the mass had reappeared and operation was refused on account of the condition of the woman.

The *post-mortem* examination gave a large abscess closely connected with the appendix, which communicated with the bowel, and wrapping the entire pelvic contents in adhesions. The sac extended entirely across the pelvis, where the organs were normal save for the adhesions.

Dr. EDWARD P. DAVIS read a paper on "*A Case of Hematocele treated by Abdominal Section and Gauze Drainage.*" This case, a woman, delivered of a child at normal term, two months later had discharges of blood from the genital track which persisted for two months; she then suffered from bearing-down pains. Four years later became pregnant which terminated in abortion. February, 1892, she was suddenly seized with pain, vomiting and syncope. When examined by Dr. Davis, six months later, she was in good physical condition, but a tumor was found in the pelvis. An exploratory abdominal incision was made, which resulted in the turning out of a lot of blood of jelly-like consistence. No rupture of tube detected. Sac was drained with gauze and wound closed. The hemorrhage was supposed to have been the result of an ectopic gestation. Later, in October, it was found that a similar condition existed on the left side, and she had missed her periods for some time. Ectopic gestation suspected and the woman kept under observation. In the discussion Dr. S. Price deplored the use of an *exploratory* incision, claiming it showed either timidity or ignorance on the part of an operator, and suggested the more thorough knowledge of the existing condition before resorting to the knife. In a case like that of Dr. Davis he would, as the patient is at present, "dread to have her go over another night." Several cases of marked severity, which were operated on with recovery, were given.

Dr G. BETTON MASSEY compared the cases of Drs. Price and Davis, and agreed with Dr. Price that, even though the chances of recovery were small, he would have advocated operation in the case of *appendicitis*, and in the case of Dr. Davis advises, even now, a waiting

policy, and mentioned the cases of hæmatocele which eventually disappeared.

Dr. W. PRICE has seen ninety-seven extra-uterine pregnancies operated upon with never yet a true hæmatocele, and believing the case of Dr. Davis to be ectopic gestation advocates prompt operative interference; exploratory incisions, as such, were unknown to him, operation always following the incision. Dr. Noble's paper on pelvic abscess treated of a case of this nature where the median incision failed, on account of the strong adhesion, to reach the accumulation, and a lateral cut was made, through which pus was evacuated. Five months earlier in operating on the same woman for ventral hernia it was found that the adhesions had all disappeared. This makes another in a series of cases reported by Dr. Noble, when the incision was made above Poupart's ligament, and pus evacuated from the broad ligament.

Dr. W. PRICE contends that these cases were not broad-ligament abscesses, but rather due to leaking from a tube or ovary, with pus walled up in that locality, and mentioned a case of injury in a boy, where pus, at the operation, came from the direction of the location of the broad ligament, and extended up to the region of the kidney, being extra-peritoneal.

Dr. JOHN E. SHOEMAKER said that abscesses of the kidney sometimes occupy this position, and can be felt through the vagina.

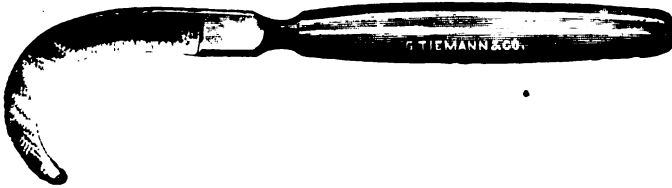
Dr. S. PRICE said that a few years ago everything was pelvic abscess and the teachings regarding the relation of diseased tubes and ovaries to pus-collections in the pelvis were not accepted with any great faith by the profession.

Dr. G. BETTON MASSEY reported "*A Case Illustrating the Treatment of Painful Prolapsed Ovaries in Young Girls.*" This patient, a young girl of poor physical development and irregular periods, suffering from endometritis and tender prolapsed ovaries, had undergone the usual line of treatment, including the wearing of a pessary, and had grown progressively worse until the removal of the ovaries was advised. Dr. Massey considered the tender ovaries to be due in some degree to the pessary but that the general condition depended more on the uterine disease proper. Under treatment with the galvanic and faradic currents the endometritis was relieved and the periods became regular. The ovary remains prolapsed but gives no trouble.

Dr. CHARLES P. NOBLE reported a second successful case of "Cæsarean Section." This was done for contracted pelvis and the woman was in the 40th week of pregnancy.

NEW INSTRUMENTS.

We will publish the cut of any new instrument or surgical device of interest to gynæcologists or obstetricians, giving the instrument-maker credit for producing the instrument on the following conditions: He must never part with the model from which the cut is made. This insures those who order the instrument that they will not buy one of the many modifications which always follow a successful invention. The second condition requires that the reproduction must have the endorsement of the inventor, or in case of a foreign instrument the authorization of one whose indorsement will guarantee its being of proper construction.



TIEMANN & CO'S. GALBIATI'S KNIFE.

This cut represents Galbiati's knife for symphysiotomy made by Tiemann & Company.



DR. DUDLEY'S DILATING IRRIGATOR.

Dr. DUDLEY's dilating irrigator, represented in this cut, enables the operator to keep the slight abrasions of surface consequent upon dilatation, even in the most careful hands, constantly doused by an antiseptic fluid. It also has the advantage of washing away the blood and preventing the formation of a clot. The instrument is so simple in construction that any further explanation is unnecessary.

RECENT WORKS ON GYNÆCOLOGY AND OBSTETRICS.

AMANN, Jr., J., *Ab. Neubildgn. d. Cervicalportion des Uterus.* Münch, Lehmann.

JOVIN (le Dr. F.).—Des différents types de métrites, leur traitement In-8. *Société d'editions scientifiques.*

PINARD (A.) et H. VARNIER.—Etudes d'anatomie obstétricale normale et pathologique. Matériaux recueillis pendant les années 1887 à 1892. In-folio avec figures et atlas de 44 planches en chromolithographie. *Steinheil.*

POZZI, S., *Lehrb. d. klin. u. operativen Gynäkologie.* Deutsch v. E. Ringier, 3. (Schl.)Bd. Basel, Sallmann.

PREUSS. *Vom Versehen der Schwangeren.* Historisch-krit. Studie Berlin, Fischer.

RICHER (le Dr. Paul).—Paralysies et contractures hystériques. Gr. in-8 avec 32 fig. *Doin.*

SCHAUTA, F., Grundr. d. operativen Geburtshilfe. 2. Aufl. Wien, Arben & Schw.

SINÉTY (le Dr. de).—De la Stérilité chez la femme et de son traitement. Reuff. Paris, 12mo.

VIVIEN (Amédée).—Placenta Prævia et tamponnements (Thèse). In-8. J.-B. Baillière.

WOLF, M., d. phys. u. sittl. Entartg. d. modernen Weibes. Neuw., Schupp.

ITEMS OF INTEREST.

The Chicago Gynæcological Society held its annual meeting Oct. 28th at the Grand Pacific Hotel and elected as officers for the ensuing year, Dr. E. J. Doering, President; Dr. Fernand Henrotin and Dr. Franklin H. Martin, Vice-Presidents; Dr. H. P. Newman, Secretary; Dr. W. T. Christopher, Editor, and Dr. A. H. Foster, Treasurer. The President-elect was inducted into office and adjournment to the banquet room was taken where, after a substantial menu had been served, the subject of Professional Entertainment during the World's Fair was discussed by Drs. Earle Etheridge, Jaggard, Henrotin, Ingals, Hotz, Senn, Church, Christopher and DeLaskie Miller. The general sentiment was that entertainment should be carried out individually and special meetings arranged for very distinguished members of the specialty from abroad. The new President was very happy in the management of the evening.—*Chicago Medical Recorder*.

Dr. L. S. McMURRY, of Louisville, has been elected Professor of Gynæcology in the Hospital College of Medicine, Medical Department of the Central University of Kentucky.

The Chicago College of Physicians and Surgeons has made the following appointments to fill vacancies caused by the death of Dr. Jackson: Dr. Charles Warrington Earle, President Board of Directors; Dr. D. A. K. Steele, Vice-President; Dr. Henry T. Byford, Professor of Gynæcology; Dr. H. P. Newman, Professor of Clinical Gynæcology; Dr. J. B. Murphy, to fill the unexpired term of Director.

Dr. PAUL F. MUNDÉ gave a reception on the 20th of December to Dr. Mann, of Buffalo. It was attended by a large and distinguished assemblage of representative men of all specialties and in general practice. The entertainment was made thoroughly enjoyable by the presence of Dr. Mann and the charming hospitality of Dr. Mundé. Dr. Mann, by the way, is looking very well, and it is to be regretted that he does not give his many friends and admirers in this city more frequent opportunity of meeting him.

THE NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS.

FEBRUARY, 1893.

SUCCESS IN GYNÆCOLOGICAL PLASTIC SURGERY.

BY THOMAS ADDIS EMMET, M.D.

As a pioneer in this branch of surgery, with an experience extending over thirty years of active work, and as the originator of a large proportion of the instruments and operations in use, my views have been frequently and positively defined. It is quite possible that among some of the younger members of the profession an impression may exist that the chief progress has been made within the last decade of years. This is not true, however, in regard either to plastic or to abdominal surgery, for to the labors of those who have gone before you the late advances have been made possible—the fruit has but matured from the seed which was carefully planted and nurtured in the past.

The plastic work in this country, until within a comparatively recent period, was noted the world over, and an earnest effort was made, both in this country and abroad, to master the details of practice. But at length, like the onslaught of an epidemic, an operative craze for abdominal surgery was developed to such an extent that it seemed at one time destined to overshadow every other attempt for the relief of suffering woman, and to number among the ranks of gynæcologists nearly every active member of the profession. I was not long ago consulted by a recent graduate as to what specialty he should study and he seemed not a little surprised when I advised him to take up that of the practice of medicine, as the one presenting the best field for a specialist then existing in the profession. I moreover stated to him my belief that among the so-called gynæcologists throughout the

country there existed a far greater number of men who would open the abdomen without a full appreciation of the responsibility assumed than there was of those who possessed skill enough to recognize the symptoms and to successfully treat a case of anæmia.

As a result, however, of this general taste for practice in abdominal surgery there has certainly been developed in this country some of the most expert abdominal operators in the world. But, at the same time, so far as my observation extends, the necessary skill for operation in plastic work has greatly deteriorated, both in this country and abroad. There is certainly no lack in enterprise or in the operations attempted, for it seems as if nothing could be proposed by even the most inexperienced person without it being quickly put in practice and apparently without thought. There exists not only a lack of dexterity in execution with many who operate, but operations are resorted to without, apparently, any clear idea of the object to be accomplished, and frequent failure is the natural consequence. In recording cases which have finally come under my care, it has often seemed as though the only purpose had been to subject the woman in turn to every procedure known to the operator, the limit being the credulity of the sufferer or the length of her purse. I have been credibly informed by a physician, that he witnessed a short time ago a curettage of the uterus, the closure of a lacerated cervix, some operation on the anterior wall of the vagina, an effort to repair the vaginal outlet or floor of the pelvis, and, finally, Alexander's operation,—all on the same patient and on the same afternoon. While one cannot but give such an operator credit for a due amount of enterprise, one's curiosity is prompted to the surmise as to what in addition to this might have been attempted, if twilight had not supervened. It is unnecessary to analyze here the counter-indications to such work, or to suggest a doubt of the result, but it is evident that the operator could have had no clear perception of what was needed for the relief of that case.

I believe this to be the chief difficulty with the average operator, for skill in execution would soon be acquired if the special need of each step were properly understood. Plastic surgery is not unlike the game of chess in the absolute necessity for understanding perfectly the object and consequences of each move.

One of the commonest mistakes, made apparently through lack of judgment, is to close a lacerated cervix and to operate on the anterior wall or to repair the floor of the pelvis at the same sitting. We are told that this is done through the necessity of economizing time and

expense to the patient, but I have yet to see a single instance where the result of either of the operations, under these circumstances, was such as would be obtained if each had been done with a sufficient interval between, and, as a rule, the condition of such a patient is not even improved. If the lack of opportunity prevents one from noting the after-result, surely a moment's reflection ought to satisfy one that primary union, when the operations are *properly* performed, could scarcely be hoped for in tissues at the vaginal outlet which had been over-stretched by the traction of a speculum during the time necessary, under ordinary circumstances, to close a laceration of the cervix.

It is now thirty years since the first operation was performed on a lacerated cervix, and it is nearly twenty five years since the profession was put in full possession of a knowledge of every step of the operation and of the indications for performing it. It is discouraging to be obliged to state, as the originator of the operation, that I almost believe more harm than good has resulted from it at the hands of the profession at large. And yet the operator, who properly selects his cases and who is able to perform skillfully this operation, will obtain a most gratifying and uniform result and one which can not be obtained by any other known means. To clear out the angles properly of dense tissue or of cysts, to unite all the ruptured uterine tissue so as to leave afterward the uterine canal of a normal size, and to so adjust with sutures the vaginal tissues that primary union results, is a more difficult operation to perform than an average ovariectomy. If it be executed under favorable conditions involution will quickly take place, so that the uterus will be reduced to the normal size in from four to six weeks. Various reflex disorders and other disturbances of the nervous system, which when unrelieved have often prompted suicide or put many a woman into a lunatic asylum, will subside after the operation and frequently before the parts have fully united. Moreover, the impaired general nutrition, which had remained unaffected by all the means resorted to previous to the operation, will at once begin to improve, and entire restoration to health within a reasonable period of time will result. All that I have stated, and more, has been accomplished so often by the hands of pains-taking men, that there is nothing to be said when failure occurs under ordinary circumstances but that the fault lay in the incapacity of the operator.

Dr. Sims gave us over thirty years ago the operation for the restoration of the anterior wall of the vagina, but few appreciate what is to be

accomplished by resorting to it. On the principle of *doing something* the operation is still sometimes attempted, but as the line of hoped-for union is so often found broken and the sutures cut out, from the traction generally exerted in the vain effort to "narrow the vagina," this valuable procedure has now to a great extent fallen into disuse.

I read a paper before the New York Obstetrical Society in 1890 on "Rectocele, its Causes and Cure," which was published in the American Journal of Obstetrics of that year, and another article termed "Injury to the Pelvic Floor and the Method of Repairing the Same." This was read before the Southern Surgical and Gynæcological Association and published in their transactions for 1891, and in the NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS for December of that year. In these papers I have fully set forth the history, the purpose, and the method of operating on the vaginal wall and floor of the pelvis. I need not, therefore, now enter into this part of the subject otherwise than in a general way to refer to some of the principles involved. It is essentially true that in every instance of pelvic inflammation, as a consequence of subsequent adhesions, and from every injury to the floor of the pelvis and to the vagina, the bloodvessels of the pelvis are deprived in some degree of their proper support. It matters naught, therefore what the means employed may be, a pessary or some surgical procedure, failure must inevitably attend every effort at relief if the true principle involved be not recognized, and the proper method suited to the individual case be not employed. So long as the energy of the operator be expended, as of late, in building up an obstruction of fat and skin anterior to the vaginal outlet, with the idea of restoring the "perineal body"—a body which does not exist—and so long as he continues to form a dash-board-like obstruction which keeps the vagina more or less filled with urine, women must continue to be subjected to unnecessary suffering and to receive no benefit.

After much reflection on the subject and after a study of cross-sections made of the female pelvis, I am fully satisfied that I have given the true pathology and explanation of this injury, fallaciously termed by many a "laceration of the perineum."

I have thus pointed out the consequences of the separation and retraction of the fascia attached along the sides of the vagina, after the levator ani muscles have been drawn apart. I have shown that the fascia, attached in the same manner along the sides of the rectum, being now no longer supported by the counter-action of these muscles, also retract, drawing the anus upward and backward toward the coccyx.

A rectocele is then formed by eversion of the vaginal outlet. The immediate effect is beyond question due to loss of support to all pelvic blood-vessels, with consequent discomfort and suffering to the female while in the upright position, from over distension of the pelvic veins. The statement is unanswerable that when the *perineum* is torn, a condition recognizable by a laceration through the sphincter ani muscle, and a portion of the recto-vaginal septum the woman suffers no inconvenience beyond loss of control. This is due to the fact that the fascia cannot be reached nor the pelvic circulation jeopardized by a tear in the median line. If we evert the under lip on to the chin by drawing it down with the fingers, we can realize how the vaginal tissues are rolled out and the canal exposed by the backward traction thus referred to. Restoration can only be accomplished by some procedure which is capable of changing the rectocele, or existing convex surface of the recto-vaginal wall, to a concave one and at the same time capable of lifting the posterior wall of the vagina up into close contact with the anterior wall. The effect of this change would be the taking in of the "slack" of the retracted vaginal fascia, to roll in again the everted vaginal outlet, to restore the anus to its natural position, to bring together the separated levator ani muscles, and finally to regain in this manner the needed support for the pelvic vessels. By this means the woman is relieved and restored to health. Both the butterfly or trefoil operation, which I devised some years ago and which is the one generally attempted, and my later modification wherein I no longer unite the tissues outside of the line of the hymen, do certainly bring about the restoration I have described, when properly executed. I know of no other procedure which will accomplish so much. But we come back again to the same point, namely the apparent difficulty in understanding the different steps of the operation. Failure must be the natural result so long as the operator does not appreciate the true purpose of what he is trying to do. Certainly, success will not reward his efforts, by giving a proper support for the pelvic blood-vessels, so long as he works outside of the vagina with the object of forming an imaginary perineal body.

Twenty-five or thirty years ago vesico-vaginal fistula was a lesion commonly found in this country and more frequently met with in New York than elsewhere. This fact is not to be accepted as an indication of insufficient knowledge here in obstetrical practice but is due to another fact, that the Poor-houses of Great Britain were emptied of such cases by emigration. During my service, some years ago, as

Surgeon-in-Chief of the Woman's Hospital, I was able to verify this fact by proving that up to that time fifty-eight per cent. of all the cases which had been admitted to the Institution had been received from this source and that the average was less than a month between their arrival in this country and their admission to the Hospital.

At a meeting of the American Gynæcological Society in 1878, I read a paper showing that of all the hundreds of cases of vesico-vaginal fistula which had passed under my observation, not a single case had occurred as the result of instrumental delivery, but all from delay. I also showed that where ergot had been administered to effect delivery, the average duration of time in hospital for these cases was increased six weeks. This meant that, where ergot had been used to increase the expulsive force of the uterus, the destruction of tissue from sloughing had been much greater, and that the time needed under these circumstances, for the cure had been increased many months. The presentation of these facts revolutionized the practice then universally followed, and the opposite teaching that artificial delivery should be effected before impaction of the head can take place was accepted, while the use of ergot, as then in vogue, was relegated to the place of mistakes. Consequently this injury is now a rare one here and is generally of a simpler character and more easily cured. But occasionally a case is yet received from some frontier region or thinly settled district, where the woman had been unable to obtain professional aid and where the course of labor had been left entirely to efforts of nature.

Such a case I discharged cured last June from the Woman's Hospital, where, as the result of some two years and a half of patient work, I succeeded in forming, by means of plastic surgery, a natural sized vagina and the entire urethra, with perfect retentive power. This was accomplished after the tissues had nearly all sloughed out of the pelvis, leaving only the rectum entire, a part of the uterus, and the upper portion of the bladder, into which I could scarcely introduce my finger because the remains of the vagina had cicatrized and contracted. To the credit of American Surgery I can claim to have thus restored between fifteen and twenty such cases during my service of over thirty-seven years at the Woman's Hospital. Each was a wonderful study to me of the amount that can be accomplished for the relief of such cases by plastic surgery, with time, perseverance, and pains-taking. I am not aware that any surgeon but myself has placed on record a single successful case of forming an artificial urethra after the entire urethral canal, with the base of the bladder and the vagina, had sloughed away.

The cases now usually met with are, as I have stated, simpler in character, and should, as a rule, be cured by a single operation; this, however, depends upon an easy and exact co-aptation of the edges and a practical experience with the use of silver wire.

The failure so often attending the efforts of an inexperienced operator, in this operation, as well as in all other plastic work about the vagina, is generally due to one or all of three causes.—These are first and the most common—an effort to unite surfaces which cannot be approximated without the exercise of an undue amount of traction, so that the sutures must necessarily cut out; secondly, to ignorance in the proper use of Sims' shield, whence the wire sutures are too tightly twisted and the parts strangulated; thirdly, to the use of a catheter not properly fitted to the individual case, since the urethra and bladder of no two women are formed exactly the same.

It is far from being an evidence of progress to abandon the use of such an agent as silver wire, whose entire fitness for this purpose has been so thoroughly tested. I am sincere in my belief that no operator, unless prejudiced from some personal cause would employ any other means after he had once mastered the proper method of using it, and the same is true in the use of Sims' self-retaining catheter; which is so simple that it can never be improved upon.

It is quite possible to close a vesico-vaginal fistula with silk sutures, with horse hair, or with other substances, but the necessity for the metallic suture, to prevent the escape of urine by capillary attraction along the course of the sutures, was fully demonstrated many years ago by Dr. Sims, who practically introduced the use of silver wire. But its general application in plastic surgery is most important for another purpose. Under ordinary circumstances the material used for sutures in general surgery would be unimportant, provided the necessary aseptic precautions were carried out. But in plastic surgery it is necessary, as a rule, to obtain the approximation and union of as wide a surface as possible, nor can this be gained with any certainty, but by the use of the metallic suture. With the silk suture it is only possible to obtain the union by such an approximation as will be but little short of causing strangulation; otherwise the soft parts will not be brought up into sufficiently close contact. As an illustration I will cite the closing with silk suture of an opening in the abdominal wall after a section. It will need but little observation to demonstrate the fact that when such a suture has been secured, an unnatural approximation of the edges of the skin and peritoneum has been brought about by the forced separation,

or spreading apart in the middle of the muscular tissue and divided fascia. The line of knots of the sutures then rest in a sulcus much below the common plain of the surrounding skin. I have long since held that frequency of ventral hernia and of imperfect union so commonly found was chiefly due to the suture in general use. It is of course quite possible to obtain a fair amount of surface united with a silk suture when tied by an expert, but I believe that under no circumstances can so broad a surface be secured as can be gained with the proper use of silver wire.

I have made many hundred abdominal sections during my professional life and for twenty years at least I have used no other suture but silver wire, for closing the abdominal wall. Those who are familiar with my work will certainly confirm the statement that so rarely has a hernia occurred after one of my operations that the exception would certainly but prove the rule. Where the metallic suture has been employed to the best advantage its action is always that of a splint to limit the lateral separation and at the same time to keep the full extent of the divided surfaces in close approximation. On account of this splint-like action of the wire, when properly adjusted, it is never necessary to tighten the loop to the same extent as must be done with silk, when the parts are to be brought well up together. In addition, I will state that experience has fully demonstrated that silver wire is the only form of suture which can be used for delicate plastic work in erectile tissue, with the slightest prospect of success.

The plastic surgeon who can utilize this form of suture will never feel the need for "flap-splitting," unless it be for closing certain forms of vesico-vaginal fistula when, in consequence of an irregular slough, a thin edge has to be approximated to a thick one. Flap-splitting is not new, however, as some of my hearers may suppose; it has simply become popularized in consequence of a foreign appropriation and endorsement. In my book on "Vesico-Vaginal Fistula," published in this city in 1868, a work now probably better known abroad than in this country, I frequently refer to this method, which I had practised long before that date. The history of the first case cited in the book shows, by a drawing, that I employed the method of flap-splitting certainly as early as the year 1864. In the first and second edition also of my work on the "Principles and Practice of Gynæcology," frequent reference will be found to flap-splitting, in the abstract of the cases of vesico-vaginal fistula; these were not reprinted in the last edition.

The necessity of relieving the parts of all undue tractions is a feature of plastic surgery which has long been recognized. But in practice the procedure, as generally employed, has by no means, as a rule, proved satisfactory, for in proportion as a free division is made of opposing tissues a surface must be left to cicatrize or to heal by granulation. As such a surface would heal with greater rapidity and long before the denuded edges of the fistula could become firmly united, an increased amount of traction must be exerted by the contracting and newly-cicatrized surface, with consequent failure of the operation.

The traction exerted by a scar-surface is a serious objection, but it is not the only one to be advanced against the presence of cicatricial tissue in the vagina. I will not delay you by theorizing as to its *rationale*, but I assure you nothing has been made clearer by human observation as to direct cause and effect, than the fact that the existence of cicatricial tissue in erectile tissue will, under favorable circumstances, disorder the nervous system and impair the general nutrition of the female. Scar-tissue seldom excites any serious manifestation so long as the general health is preserved, but if this be once lost through serious illness or should the nervous system become overtaxed from shock or mental strain, the consequences will be well marked. Once the reflex-symptoms become established, nothing will relieve the consequent condition of chronic invalidism but complete removal of the cause. If the experience of a long professional life, and of one trained to close observation be worthy of consideration, I can claim to have removed in hundreds of instances scar-tissue from the cervix uteri, from the urethra, and even from about the vaginal outlet, with the effect of promptly restoring the sufferer to health; I have done this after all other means had failed. Holding these views I necessarily regard the production of cicatricial tissue about the female organs of generation as bad surgery when it is possible to avoid it, and I advocate as a rule its removal when it can be done. It has been my practice for many years never to allow a surface to heal by granulation in this part of the body.

When I amputate the cervix or remove a large portion of the body of the uterus I seek to obtain primary union by carefully covering over the raw surfaces with the vaginal tissue. Whenever I free a flap by dividing an opposing band I at once separate the cut edge of the band to as great an extent as possible, so as to make nearly a circular denuded surface, and then I carefully unite the line by bringing these edges together in the opposite direction or at a right angle to the line of incision. I do this with as much care as if closing the

edges of the fistula itself and with the effect of permanently freeing the parts to the extent of the length of incision made across the band or opposing surface. As primary union is to be expected under these circumstances, the capacity of the vagina will be increased just so much, with no traction on the edges of the closed fistula. The application of this principle can be otherwise utilized in breaking up a cicatricial line which is sometimes found running along the sides of the vagina in connection with a lacerated cervix. Such a seam will often produce a great deal of nervous disturbance and will frequently, as the woman advances in life, cause, by the traction exerted, both prolapse and retroversion of the uterus. At one or more points, according to the necessity, the band should be snipped with a pair of scissors, through to the healthy tissue under-lying, and often it is advisable to extend the incised line to half an inch or more beyond, on each side. Then, in the manner already described, the divided edges should be separated as much as possible, so that healthy tissue from each side may be brought into line to fill the space. It is necessary to insert at least two interrupted sutures, to keep the divided edges of the scar separated until the line of healthy tissue has firmly united. Notwithstanding the new line of union will correspond to the direction of the primary existing band, but little traction can be exerted provided the coaptation be made as carefully as the edges of a wound would be on the skin, to avoid the formation of a scar. If necessary this method may be repeated until the line has been broken up, and the procedure will be found a more efficacious one than would be an exsection of the whole scar at one operation.

The operation which I introduced for closing a laceration through the sphincter ani muscle and a portion of the recto-vaginal septum is so simple and meets so fully every indication that the result should be one of the most certain in surgery when properly performed. And yet it is to-day, from a lack of knowledge in the use of the silver-suture, one of the most uncertain operations in the hands of the average operator. I read a paper on "Laceration of the Perineum involving the Sphincter Ani, an operation for securing union of the muscle," at the meeting of the State Society in 1873. This was published in the Medical Record, March 15th following, and in the State Society Transactions for that year; also in my work on the "Principles and Practice of Gynæcology," the same subject is fully treated of. I need not, therefore, review the difficulties encountered during the years of observation and study of this injury, before I was able to appreciate the cause of failure

and to succeed in perfecting an operation to overcome the difficulty. This I accomplished some twenty years ago and have since been perfectly satisfied with my results. And yet very few have availed themselves of this knowledge, so that failure is still the rule with most operators in that they are unable to unite any portion of the sphincter ani muscle itself.

I will doubtless be told that notwithstanding an apparent failure in the operation, by the formation of an abscess or by the cutting out of the sutures, there yet always occurs an improvement in the retentive power as the edges cicatrize. This is often true but the dependence upon a cicatrized surface for retentive power is of as low a grade of surgery as would be the lopping-off of a limb and the sticking of its stump into boiling pitch or oil to arrest the bleeding. There is always a want of control, and a certain amount of leakage going on, in every case, which renders the woman's condition an unpleasant one when the partial retentive power is due to traction exerted by cicatricial tissue.

If it were not possible to restore the parts to a state of health, and to preserve the natural elasticity of the tissues, such a substitute might be accepted without question. But under the circumstances a great injustice is done when the operator fails through his own inability, and the wrong is all the greater when from some unnecessary device the tissues may be so altered in character as to render the woman's condition incurable afterward. To split the edges, as is being done so frequently of late, is, from my standpoint at least, both hurtful and unnecessary. It is simply an acknowledgment on the part of the operator that he has no clear idea of the existing condition and cannot consequently repair the damage. To substitute so useless a procedure is beyond my comprehension since it does not fill a single indication and is done in lieu of an operation which, if properly executed, will restore the function of the muscle and at the same time preserve the natural elasticity of the neighboring tissues. A tear in the recto-vaginal septum always heals, as is also the case with a lacerated cervix, more rapidly along the vaginal edge than in the deeper tissues. So that the latter soon becomes covered in by the line of union which quickly forms between the mucous edges of the vagina and those of the rectum. After this union has taken place, a thin edge is frequently presented as if there had been a loss of tissue. But such is not the case, for the tissues were only torn apart, and the occurrence of a slough is certainly a very rare sequence.

Almost without an exception, the natural thickness of the septum

will be found retracted but still in close approximation, while the relative relation of the tissues remains preserved. All that it is necessary to do to obtain a surface for union of any desired width, is to denude the vaginal surface upward from the edge of the mucous membrane of the rectum. Every portion of the torn recto-vaginal septum can not only be brought up together, but, if desirable, any reasonable amount, in addition, of vaginal surface can be added, and free from traction.

The fact must also be appreciated that the ruptured sphincter muscle also retracts, changes its position, and soon becomes atrophied. It is necessary to freshen properly the divided edges of the muscle and to introduce the last suture, in the manner I have described, so as to turn up together the ends of the muscle in proper relation. For years past I have used simply interrupted silver sutures and have introduced them as if for closing a recto-vaginal fistula, beginning at the distal angle. If these sutures be so secured as to gain a broad surface in union, if the edges of the divided muscle be united and care be taken to cause a fluid movement of the bowels daily, this operation will prove in result one of the most certain in plastic surgery.

Other points quite essential for success could be referred to, but the field has proved too extensive for me to do more than treat most superficially those points which we have already considered. But my purpose will have been fully gained if I succeed in establishing the fact that the object of a plastic surgeon should be to preserve in erectile tissue, the natural elasticity of the parts, to restore as far as possible those parts which have been lost, and to avoid the unnecessary formation of cicatricial tissue.

ABDOMINAL AND UTERINE TOLERANCE IN PREGNANT
WOMEN, AS SHOWN BY THE LOW RATE OF MOR-
TALITY UNDER SEVERE LACERATED AND
OTHER WOUNDS THE RESULT OF DIRECT
VIOLENCE.

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We propose in this paper to confine our attention to wounds of the abdomen, and of the abdomen and uterus, directly inflicted, and to discard all cases in which the injury has been mainly or entirely received through the lower pelvis. This will necessarily limit the notice in large degree to cases of laceration, and these have been most frequently and frightfully inflicted by the horns of ruminants, as of the bull, ox, cow, bison, and buffalo, and, as would naturally be supposed, in the largest number by those of the cow. The wives of dairymen are particularly liable to injury in the field and barn-yard, and were all of the gored cases placed upon record, we should be amazed at the variety of their wounds, and the number of their narrow escapes from death, by abdominal, perineal, and other forms of injury. Perhaps in no sphere in life have more extensive lacerations of the abdomen been produced, than those which the country surgeon has had to treat in the wives of farmers, after horn-rips and picket-fence tears, when in advanced pregnancy; the tension and enlargement of the belly favoring the formation of a long wound in extreme cases.

Many unimpregnated women have likewise been injured and escaped death, but the condition of pregnancy changes the prognostic conjecture, and makes the recovery more astonishing, particularly where the foetus has been violently liberated through the rent. When we look into our own experience, as to the producing causes of abortion and miscarriage, particularly in the higher walks of life and in neurotic women, we are amazed to find what trifles have, in some instances, induced expulsive contractions of the uterus. One of my patients, to all appearances a strong, hale woman, had a great abhorrence of tree-worms and caterpillars, and aborted upon two occasions under their influence; once when a caterpillar fell from a tree upon the crown of her bare head, and a

second time, when stopped in the street to have some canker-worms removed from the back of her mantle; on each occasion she experienced a sudden shock, followed at once by the pains of labor. This woman managed to escape such mishaps during eight out of eleven pregnancies, and carried the foetuses to maturity. Another woman, not of delicate build, but living in luxury, fell at once in labor, after lifting down a little boy over three steps in a curve of the stairway that she regarded as unsafe for him to step down. In this case, an increase of abdominal pressure appears to have opened a delicately closed cervix, brought on hemorrhage, and at once excited uterine contractions. In view of such trifling excitants to labor, we are the more astonished to learn, that in a number of instances hale country women have not had their gestation interrupted by severe and extensive lacerations of the abdominal wall, with large protrusion of the intestines, and even with the gravid uterus prolapsed through the wound, but have carried the foetus to its full maturity, and been delivered of it alive and in good condition.

When a pregnant woman falls or is thrown upon the pointed pale of a fence, so that the stake is made to enter and lacerate her abdomen, she may receive a wound equal in extent to any that has been recorded as the result of a horn-rip. As a remarkable instance of such an injury occurring in this country, I quote the following from the experience of the late Dr. James C. Bradbury, of Old Town, Maine, a distinguished surgeon of the State, the case dating back forty years :

Mrs. V., a large and muscular woman, pregnant nearly seven months, fell upon a picket-fence from a platform that gave way under her, when engaged in shaking a rug, the platform resting on the fence. A picket entered her abdomen just below the umbilicus, and produced a transverse laceration, computed to measure twenty inches in length, between the *cristæ ilii*, with a downward curve. The doctor fortunately saw the woman in a few minutes; found a gaping wound six or eight inches wide, the upper lip being folded over the epigastrium, and a large foetus struggling violently *in utero*, but with comparatively little hemorrhage. The patient was placed at once under chloroform, the wound closed by sutures, and additionally secured by adhesive strips, after which she was kept quiet by morphia. The whole wound was apparently about to unite by the first intention, and with an almost entire absence of constitutional disturbance, when the foolish woman, about the sixth day, ate a pretty full meal of indigestible food, after which the wound became of a dark venous color; reopened in its middle third, and the edges sloughed a little, to unite by granulation. About two months after the

accident the woman gave birth to the fœtus, by natural, quick, and easy labor,¹

Dr. Hiram Corson, of Montgomery County, Pennsylvania, one of the oldest physicians in the State, reports to me by letter that he was once called to see a woman eight months pregnant, who had been thrown upon the top of a picket-fence by the upsetting of a wagon which was descending a pretty steep hill. He found a wound of three or four inches in length, though the abdominal wall, down to the uterus, which he closed by sutures. When the laceration was nearly healed, the woman fell into labor, and gave birth to a living child without any difficulty.

No doubt many other cases such as these might be found in the private records of our country practitioners, but the two examples serve to show that they have very different nervous systems to deal with, from what we usually find in women brought up in our large cities.

In considering the subject of horn-lacerations of the abdomen, we are obliged to divide it into two heads: one form of injury being confined to the abdominal wall of the pregnant woman, while the other includes both it and the uterus, the latter being the more dangerous of the two casualties, in consequence of the additional risk of the uterine rent, which is of itself the most serious injury of the two. Where a pregnant woman has nearly reached the full term of utero-gestation, when the uterus is in contact with the abdominal wall, and the lower part of the abdominal protrusion gravitates toward a horizontal line, the thrust and tossing motion of the horn is, in nearly all cases, made to inflict a coelio-hysterotic rip. But where the pregnancy is at six or seven months, the protected position of the uterus and the form of the abdomen favor the escape of the former in the character of the injury. The accompanying tabular record presents several very remarkable cases in which not only did the uterus of the pregnant woman only escape being opened by the horn, but the woman also escaped the induction of premature labor as a result of the injury. Some of these casualties have very frightful records, and the results of treatment were scarcely such as must have been looked for by the surgeons in charge; in fact, in some instances the relatives were warned to expect death, when recovery afterward took place.

The most remarkable and interesting of all the varieties of horn-laceration in pregnant women is that which, from its nature, may be classed as *Cæsarean*, of which the number of examples and the low

¹ Boston Medical and Surgical Journal, 1882, vol. xlv. p. 265.

record of mortality are beyond what might be conjectured. In view of the fact that in but one case of this class was the uterine wound sutured, and in no case was the obstetrical treatment truly aseptic, it is almost incredible that there should have been but four deaths among fourteen subjects; that two of the four dead women should have left children that are now living in the States of New York and Missouri, and that in four cases both the mother and child should have lived.

We have endeavored, in the seven cases where the children lived, to ascertain whether they subsequently died at an early age, or grew to maturity. Five of these children were boys, one was a girl, and the sex of the seventh was not given. One boy lived to be a man over fifty years old; one is now forty-one; a third is nearly twenty-five; a fourth was lost sight of when a lad; the fifth died at nine months; and the girl is now ten years old. Four of the seven mothers recovered, and three are known to have survived a number of years; in fact, one now lives, after a period of forty-one years, and her son likewise.

Abdominal and uterine tolerance will be found at their maximum in strong, healthy country women, who have not been subjected to the exhausting pains of labor, and whose nervous organizations fit them for enduring the shock of injury; and at the minimum in the rachitic or coxalgic dwarf, already weakened by labor, and enervated by deforming and stunting bone disease. Subject the latter to the method of horn-rip delivery, and we should soon learn how important to success is the previous good health of the woman. The suturing of the uterine wound is far more important to success in the case of a rachitic dwarf than in that of a strong, muscular woman, for the simple reason that uterine contractions cannot be depended upon for their office in closing the wound in the uterus and keeping it shut, except in cases where the muscles of the organ are in an active, and not an exhausted condition.

It has been objected, in Germany, that American Cæsarean operators have adopted the plan of frequently making the uterine incision upon a passive organ—that is, one in which there has not commenced any of the contractions of labor—and that this endangers the life of the patient, by inducing muscular atony, leading to hemorrhage. Certainly the results in horn-rip cases, and in several operations witnessed by me in this city, would teach quite the contrary. Opening the inactive uterus in Philadelphia has had the effect, in every instance, of inducing immediate contractions of the organ, favoring the separation of the placenta and the prevention of hemorrhage. In two instances in

Europe it was thought necessary to convert a proposed Säger into a Porro operation, in order to save the woman from death by hemorrhage; but in these cases, labor was in progress before the operation commenced. As a general rule, cases in which the placenta is found under the line of incision give rise to the larger amounts of hemorrhage; but this is not always the case, for I have seen quite the contrary; the largest measure of loss witnessed being from an incised venous sinus, where the placenta was attached postero-laterally.

A cow is said, in common language, to have "hooked" a woman, an expression which applies to the motion of her head, intended to gore and then toss upward with the horn. If the weapon is very sharp, and the motion rapid, the parts lacerated may present an incised appearance, and union by first intention may take place after the wound has been sutured. Perfect and entire union, as after a knife-incision, throughout the whole length of the laceration, and within a few days, will very rarely follow the casualty. Points of weakness in union are apt to result, and herinæ as a final disability have not been uncommon. Wounds of the intestines have been very rarely discovered after horn-lacerations in India, where they have been quite common in the experience of some British surgeons, the native buffalo being much given to using his horns upon the herdsman and boys who drive them from pasture. This rule also applies in the cases of abdominal rip in pregnant women, and for two reasons—viz., the horn seldom comes in contact with an intestine where the woman is far advanced in pregnancy; and where she is in the early months, it will rarely perforate or tear the slippery outer coat of the yielding, movable bowel. In some cases on record, the intestines have no doubt been wounded, as the symptoms and early death of the women would appear to indicate. Where there is no such complication, the teachings of history would lead us to give a favorable prognosis, although our fears might induce us to look on the dark side. The lacerations are usually in an oblique direction; sometimes they are transverse; but it is very rare to find them in the direction of the linea alba.

For the same reason that the intestines are rarely torn, we may find a mural laceration, even of several inches in length, which has not opened the peritoneal cavity, the peritoneum preserving its integrity and the small intestine showing through it. In another case, we may find that the horn has cut a long furrow, and has then made a penetrating rip of a few inches, with eventration of omentum and intestines.

About twenty years ago, Mrs. Capron, of Chicago, then a missionary

in india, was called to see the wife of a Brahmin lawyer, at the time five months pregnant, who had received a horn-rip from a driving-buffalo, such as are used in the place of horses in that country. The wound was directly beneath the umbilicus, and about six inches in length, the gash extending down to the peritoneum, but not through it. Strips of adhesive plaster sufficed to keep the wound closed, and to secure primary union without suppuration; the woman carried her foetus to maturity, and she and her boy were alive long afterward.

Contused horn-wounds of the abdomen, without laceration of surface, may be much more serious in their effects than where the parts have been torn through; and this is particularly the case where the placenta is attached to the anterior section of the uterine wall and is beneath the point struck by the horn. In such a casualty the placenta may be centrally detached, the woman brought to bed with a dead foetus, and her life endangered by hemorrhage from the placental site.¹

Horn perforations of the abdomen, or the abdomen and uterus, without extention by subsequent laceration, are very rare, for in such a casualty the animal is usually passive, and the woman is thrown upon his horn, as in the case of the production of a stake-wound. Even a horn-perforation may give exit to the hand of the foetus, and require that labor should be induced as in Case 8 of table.

An interesting case of perforation by a wooden pitchfork was reported in the *Journal de Chirurgie* of Malgaigne, for December, 1846, by Dr. C. Czajenski, the subject being a healthy woman, twenty-seven years old, and pregnant five and a half months. The accident took place on July 18, 1845, in the Commune of Château Loiret, and occurred in this manner. The woman chased a cow, and designed to strike her with the handle of a two-pronged oak fork, which she held by the tine end. The end of the handle not quite reaching the animal, fell to the ground, and she in her impetuosity stumbled over the prong-end, and one tine was forced into her abdomen and uterus, through the edge of the placenta, and into the lower angle of the left shoulder-blade of the foetus. The fork entered about two and three-quarters inches above the pubes, and near the external border of the right rectus abdominis muscle, and its withdrawal was followed by an evacuation of liquor amnii, slightly streaked with blood. Four days later she gave birth to a dead male foetus, which presented by the breech, and there was no marked hemorrhage. After a long and serious illness this woman finally recovered; the wound of the abdomen became fistulous, and

¹See the Cummins case, in Dublin Quarterly Journal, 1858, xxxv. pp. 228-231.

did not close for four months; an abscess opened into it and discharged freely, as well as a small fecal fistula, through which seeds of currants, gas and fluid having a fecal odor escaped. This fecal fistula did not make its appearance until eighteen days after the accident, and followed an attack of diarrhoea lasting over two days, with ten or twelve passages in twenty-four hours; the uterine wound is believed to have healed in a few days. The slight injury of the intestine is probably due to the fact that the fork was of oak; had it been of hickory, with the polish of such instruments used here, the bowel would most likely have been passed by. It is possible, however, that the intestinal lesion was purely secondary. •

It would appear to be historically established that an incised wound of violence in the uterus is more likely to end fatally than a laceration inflicted by a smooth, rapidly driven weapon; and that the most dangerous part of the organ to be opened, is its fundus. Hence sword-thrusts of this region have generally proved fatal, and in most instances rapidly, by hemorrhage. Of the six self-inflicted Cæsarean sections upon record, the only one that ended in death was a fundal operation, and the woman died of hemorrhage.

Peritonitis of a fatal character, under the best care, is apt to follow an infliction of violence made with intent to kill by knife, dirk or rapier. An interesting illustration of this may be found recorded in the *Bulletin et Mémoires de la Société de Chirurgie de Paris*, 1887, N. S. viii. pp. 627-638, by Dr. Schwarz, of which the following is a condensation; A seamstress, of twenty-two years, was admitted to the Hôpital Baujon, Paris, on August 18, 1887, with a knife-wound of the abdomen, received the evening before, having protruding through the incision the two feet of a foetus, of between six and seven months, and about a yard of small intestine. The wound was linear, to the left of the median line, directed obliquely from below upward and from right to left, near the umbilicus, and about two and a half inches in length. The dressing of the parts was commenced about seven hours after the receipt of the injury, the temperature of the woman being normal, pulse frequent but not small, and condition fair. The intestines had not been wounded. The parts were washed with hot boiled water, and with the liquor of Van Swieten (liq. potass. permangan., 1 : 1000). The foetal head being held *in utero*, the wound of the organ was extended for its liberation. The opening in the uterus was transverse, between the cornua, and the placenta was not wounded; the abdominal cavity contained a large quantity of blood-clots, which were washed out with hot boiled water,

and the uterus was treated likewise; after which it was closed with twelve catgut sutures, and the abdomen with ten metallic ones. The patient died of peritonitis in four and a half days, with abundant intestinal adhesions; and some sero-purulent fluid was found in the abdominal cavity. The uterine and abdominal wounds were fully united, and the condition of the uterine cavity was normal. The important question is: Why did this woman have a fatal peritonitis when so large a proportion of the horn-ripped subjects escaped? What influence does the moral and mental shock of such cases, aided by the blood-loss, exert in determining an attack of peritonitis? Did the liquor of Van Swieten start the inflammation? It has been known to do this.

We note a still more unaccountable result. At the meeting of the Anatomical Society of Paris, in April, 1838, Dr. Laborie exhibited the uterus of a woman who had died from the effects of a knife-wound when pregnant five and a half months. The knife had a wide blade, which penetrated the uterus and evacuated the amniotic fluid, as recognized by its peculiar odor. Ten hours after the injury the woman aborted, and grave symptoms of prostration appeared, but without those of peritonitis; and in two days after the stabbing she died. At the anterior superior part of the uterus was found a small wound penetrating its cavity, and there were slight traces of peritoneal inflammation; there were no other organs diseased to account for the death.¹ In cases such as this there is both a moral and a physical shock, acting as factors in the production of death, as stab wounds which have proved fatal have been certainly less severe in appearance than horn and stake wounds from which pregnant women have recovered.

Illegitimacy in the pregnancy, especially in communities where the moral tone of society strongly condemns it, has also a depressing effect in many cases of knife-wounding of the uterus at the hands of another, aside from the extent of the injury. The mind appears in some cases to have more to do with the cause of death than the body; and every surgeon of large hospital experience has had to deplore the effects of emotional depression in rendering injuries fatal that should otherwise have resulted in recovery. In horn-rip cases of great gravity, as in No. 1 of the table, the women have, on the contrary, shown very marked endurance and hopefulness in some instances, and have even encouraged the surgeon to look for their recovery almost against his own convictions.

Gunshot wounds of the abdomen and gravid uterus will generally

¹ Bulletin de la Société Anatomique de Paris, 1838, tome xiii, p. 38.



destroy the life of the foetus and lead to its expulsion; but there are exceptions to the first effect; On November 16, 1733, a pregnant woman of thirty, and about a week from her time, was shot, in Bischweiler, Germany, by a drunken man with a pistol loaded with small balls, one of which wounded the foetus near the right clavicle. The woman was thrown into labor and bore a living child, which, when a week old, had the ball, which was of the size of a pea, exsected. The woman recovered, although wounded, also, in her shoulder, side and hip.¹ As the uterus is not a vital organ, a bullet may pass through it and the foetus and bury itself in the lumbar muscles of the woman without producing her death; and this result will be the more likely to follow if she knows that the shot was purely accidental. The balls of very small revolvers are the least dangerous, and particularly so where the body of the foetus arrests the transit of the bullet. Two examples in point are here given:

Case 1. On July 4, 1876, a Swede of thirty-eight, pregnant, near her full term, was riding in a farmer's wagon, in Sibley County, Minnesota, by the side of a young man who, in carelessly handling a pistol, managed to discharge it when directed toward the side of her abdomen. The ball entered at a point two inches above the right ilium and a little back of the anterior superior spinous process, and passed downward, forward, and inward into the body of the foetus. A little shock was felt, but no serious symptoms followed. In forty hours the woman gave birth to a dead foetus by a labor in all respects normal, except that there was some nervous prostration, and this was followed by a complete recovery.²

Case 2. On June 20, 1879, a colored primipara of eighteen, then six months pregnant, was wounded accidentally in the abdomen by a pistol-ball weighing one hundred and thirty-six grains, which traversed from below upward, by a rebound shot fired from horseback at a distance of sixty yards, the woman being hidden from view by some bushes. The ball entered about two inches above the anterior superior spinous process of the ilium and ranged upward through uterus and foetus to bury itself somewhere in the back part of the woman. Labor came on in less than twenty-four hours, and the foetus, placenta, and membranes were expelled simultaneously, with very little loss of blood.

¹ "Uterum Gravidæ una cum Foetu Vulneratum," J. Martino Reichard. Argentor, 1735.

² Reported by Dr. Franklin Staples, of Winona, Minn. New York Medical Record, 1876, vol. ii. p. 595.

The ball entered the foetus just below the left scapula, ranged diagonally through the trunk, and made its exit from the right hip. Peritonitis followed, and the woman made a narrow escape from death. She menstruated in four weeks and was well in a month. The ball was not found. From the small amount of liquor amnii lost in her labor it was thought to have drained into the abdominal cavity through the wound in the uterus.¹

Ante-partum infanticide by abdomino-uterine puncture, or incision, inflicted by the woman herself, is of very rare occurrence; and it is fortunate that the illegitimately impregnated subject does not know with what degree of safety to herself a fatal puncture may be inflicted upon her foetus when in the last weeks of gestation. The following case, furnished me by Prof. Barton Cooke Hirst, of the University of Pennsylvania, shows the measure of tolerance possible under such an injury. It occurred some eighteen months ago:

"A young girl, illegitimately impregnated for the first time, was delivered in the Maternity Hospital of a dead infant at term. The child was removed at once for burial and no cause noted for the still birth. It was remarked that the girl had some pus issuing from her umbilicus after delivery; but she could or would give no explanation for it, and stated that it had been going on for some time. It gradually ceased, and the patient left the hospital in good condition. After her departure one of her intimates among the patients volunteered the information to a nurse that about two weeks before delivery the girl had driven a long hat-pin through her navel to a great depth with the avowed intention of destroying her child. She had suffered great pain afterward, which, however, she concealed." This was, no doubt, due to a local traumatic peritonitis.

Ante-partum infanticide by abdomino-uterine incision under a self-infliction is a much more desperate procedure than that accomplished by a deep puncture as just described. A noted instance of this form of foeticide will be found in *The American Journal of the Medical Sciences* for February, 1888, page 156. In this case, dating March 28, 1886, a woman, living near Viterbo, Italy, single, and twenty-three years of age, made an incision of four and three-quarters inches in length in the middle of her right iliac region and through the uterine wall, killed the foetus by wounds in its chest and abdomen before extracting it, and finished by cutting off its head. This woman

¹ Reported by Dr. George B. Hays, Plaquemines Parish, La. New Orleans Medical and Surgical Journal, October, 1879, p. 423.

recovered completely in forty-eight days, and was then under police restraint as an infanticide. The infant was proved by necroscopic examination to have never breathed. The woman had denied her pregnancy, and took these steps to prove the alleged falsity of the charges made against her.

SPECIAL REMARKS.—Children delivered by the Cæsarean section have sometimes been named "Macduff" under an impression that this hero of Shakespeare was "ripped out" of his mother. That such a casualty may have happened to her is quite possible, in view of the fact that several other women have suffered the same form of injury, whose sons thus liberated have lived to mature age. But that Mrs. Macduff was thus delivered is based upon a very questionable dialogue uttered under conditions of a highly improbable character, and first published more than three centuries after the occurrence by John de Fordun, followed by Hector Boece, two Scotch historians who are not much credited, and the second of whom is commonly estimated as "mendacious." John de Fordun was a priest of the church of Fordun in 1377, and Hector Boece, was born in Dundee about the year 1470. Raphael Holinshed copied their statements, and from his work of 1577 the bard of Ayon obtained the story, which, with a poet's license, he slightly altered.

Because Macduff might very readily have been "ripped out" of his mother's womb is no proof that he was thus hurried into the world, and critics of the present day in Scotland are disposed to regard the whole tale as a fabrication. Even the proof that Macduff was the one who killed Macbeth rests much more on inference than upon any array of historical facts.

Concessions which were granted by the Crown to the Macduff descendants for some special act would indicate that the death of the usurper may have been placed to the credit of the head of the family. Conjecture may give the horn-Cæsarean operation an age equal to that of the pyramids of Egypt, but facts and evidence make it much more recent in years.

Tabular record, Case 1. The abdominal laceration of 1530 is one of six horn-ripped cases in which the uterus escaped injury. The women did not in any instance miscarry, and all are believed to have carried their children to full maturity, as five of them are known to have done. The report of Case 1 rests upon the authority of the celebrated classical scholar and antiquarian, Martin Crusius, who was born in Grebern in 1526, and died in 1607, having been contemporaneous

Table of Animal Horn-rips of the Abdomen and of

No.	Date.	Locality.	Physician in charge after the casualty.	Name, age or social position of the woman.	Animal inflicting the laceration.	Character of the laceration.
1	Sept, 1530	Owa, Germany.	Jno. Hamelius, public bath-house keeper.	Cath. Jaeger, wife of a herdsman, pregnant 6 months.	Bull	<i>Abdominal.</i> Uterus and intestines protruding and soiled; 19 stitches inserted.
2	Aug. 29, 1647	Zaandam, Holland.	Drs. Ireton and Jano Bernhard.	Mrs. Egh, wife of a farmer; strong and active.	Bull	<i>Abdominal and uterine.</i> Wound of abdomen 12 finger-breadths long. Gored in perineum; bladder torn; child expelled through rent.
3	Oct. 20, 1779	Offdillen, Dillenberg, Germany.	Dr. Frederick Augustus Fritse.	Mrs. Schullers a multipara; poor; of delicate build, but healthy.	Ox	<i>Abdominal and uterine.</i> Wound in right hypochondrium L-shaped; arm protruding; rent enlarged 3 inches by the knife.
4	June 25, 1785	Province of Guypuscoa, Spain.	Drs. Di Zubeldia and Monaco.	Marie Gratien a robust multipara.	Ox	<i>Abdominal and uterine.</i> Wound transverse; 8 inches.
5	July 30, 1789	Caudebec, Lower Seine France.	Drs. Lechaptois and Lair-Corigny.	M'rie Brument a multipara of 36.	Bull	<i>Abdominal and uterine.</i> Wound transverse; 10 inches in hypogastric region.
6	Nov. 30, 1805	Villanova, Lower Po, Italy.	Dr. Francesco Duo.	Woman, 35, far advanced in pregnancy.	Cow	<i>Abdominal and uterine.</i> Two wounds; elbow protruding in left hypochondrium. Wound enlarged by knife.
7	1830 or 1832	China, Nuevo Leon, Mexico.	Patient sewed up her own abdomen and dressed it.	Señora Juana Gonzales de Cavazos, mother of two or three.	Cow	<i>Abdominal and uterine.</i> Child immediately delivered. She was engaged in milking.
8	June 12, 1834	Madras, India.	Surgeon G. G. Spillsbury.	Wife of a Sepoy.	Buffalo of India	<i>Abdominal and uterine.</i> Punctured transverse wound above pubes, 2 inches long; hand protruding.
9	.....	Edinburgh, Scotland.	Dr. John Thatcher.	.....	Cow	<i>Abdominal and uterine.</i>
10	June 27, 1850	City of Mexico.	Prof. Miguel Jimenez.	Señora Jacinta Guzman, young and strong.	Cow	<i>Abdominal and uterine.</i> Wound 8 inches; enlarged a little by the knife; breech presented. Placenta delivered per vaginam.
11	Summer of 1852	Franklin Co., Nebraska.	The Pawnee Indians.	A Pawnee squaw, of about 30.	Bison bull	<i>Abdominal and uterine.</i> Fœtus extracted by the horn.

Result to woman.	Result to child.	Remarks.	References.
Recovered	Carried three months; girl, Annie, lived to age of eight years.	Woman died May 10, 1559, having survived over 28 years.	Annals Suevici, by Martin Crusius Francof, 1596, Part iii., Lib., xi., cap. 5, p. 614. Disputationes Chirurg. Select. Albertus von Haller, v. 5. 1756, p. 120. art. xix.
Died	Lived. Boy, Jacob, bruised. Died May 23, 1648.	Woman vomited blood and fecal matter; lived forty-one hours. Husband also killed. Casualty commemorated by a painting in a church at Zaandam.	Thomæ Bartolini, "Historiarum Anatomicarum Rariorum." Centuriæ i. et ii., Hafniæ, 1654, p. 180-184. Henri van Roonhuyzen's Letter, 1662, Amsterdam.
Recovered	Dead. A six months' fetus.	Wound healed in five weeks. Woman died from hemorrhage after delivery on April 28, 1781; blood in abdominal cavity, but uterus not ruptured.	Schmucker, Vermichte Chirurgische Schriften, Band iii., 1782, S. 59. London Med. Journ., vol. ii., 1790, p. 148-160. Journ. de Chir., par M. Desault, Paris, 1791, p. 322-326. Journ. de Méd. et de Chir. Prat., vol. vii., 1836, p. 417.
Recovered	Dead. In ninth month. Killed.	Woman had a small hernia; bore two children at later periods.	Journ. de Chirurgie, par M. Desault, Paris 1791, p. 322-326.
Recovered	Died in eight hours; an eight months' fetus.	Woman had a small hernia; survived twenty years.	Recueil Periodique de la Soc. de Méd. de Paris, tome v. p. 70-81. Journ. de Méd. et de Chirurgie Prat., tome vii., 1836, p. 417.
Recovered	Died. Killed by a contusion of the chest.	Woman had a large hernia in the line of the cicatrix.	Giornale di Medicina, Pavia, 1814. Sem. ii. p. 37.
Recovered	Lived. Boy named Librado; lived to be over fifty years old.	Woman of great nerve and of a masculine character. Bore three children at later periods; all living in September, 1891.	Communicated by Rr. Federico Semeleder, Mexico; attested by Narciso Davila, Senator for Nuevo Leon, and Juan de Dios Villalon, Paymaster Treas. Dept., Sept. 23, 1891.
Recovered	Died. Injured in neck and shoulder; at term, delivered per vaginum.	Woman was riding; buffalo stumbled and fell; she was pitched upon the horn. Labor excited artificially.	Trans. Med. Phys. Soc., Calcutta, 1835, vol. vii. part. 2.
Recovered	Lived.	Woman gored in King's Park—then a pasture ground.	Edinburgh Monthly Journ. Med. Sci., July, 1850, p. 88.
Recovered	Lived. A boy; near term; uninjured; cried lustily. A lawyer in September, 1891.	Woman had a hernia in the cicatrix; was alive in September, 1891. Married a second time.	American Journ. Obstetrics, Oct. 1887, p. 1037. Private communications of Professor Semeleder and others in 1891.
Recovered	Dead. Killed by a horn-thrust.	Woman seen alive and well by G. E. Powell at a later visit.	Communicated by Dr. Geo. E. Powell, La Crosse, Wis., who saw the casualty; American Journ. Obstetrics, Oct. 1887.

Table of Animal Horn-rips of the Abdomen and of

	Date.	Locality.	Physician in charge after the casualty.	Name, age, or social position of the woman.	Animal inflicting the laceration.	Character of the laceration.
12	June 5, 1853	Bloomington, Illinois.	Dr. A. H. Luce.	Mrs. John B. Thrasher, 6 months pregnant.	Cow	<i>Abdominal.</i> Wound transverse, 11 inches in length.
13	Summer of 1860	Waterloo, Monroe Co., Illinois.	Dr. Alphonso Wetmore.	Farmer's wife about 30, strong and muscular.	Cow	<i>Abdominal.</i> Six months pregnant; wound oblique and irregular in left hypochondrium to below the umbilicus; omentum and intestines protruding.
14	Feb. 25, 1861	Guntoor, India.	Mr. Thomas Crowdace.	Uckamah, 26, 6th month of pregnancy; a pauper Hindoo.	Buffalo of India.	<i>Abdominal.</i> Laceration by side of umbilicus $1\frac{1}{2}$ inches long; 19 inches of intestine protruding.
15	April 5, 1867	West Point, New York.	Dr. E. N. Marsh U. S. Army.	Mrs. F., 42, mother of 8; in 8th month of pregnancy.	Cow	<i>Abdominal and uterine.</i> Wound of abdomen 5 inches long, from umbilicus outward and downward; several feet of intestines protruding uterus partly inverted through the rent.
16	Last week in June, 1867	Tlilapam, near Orizaba, Mexico.	Dr. Manuel Maria Fernandez.	Maria Martina Crescencia de la Cruz, 26; an Indian fruit-seller.	Bull	<i>Abdominal and uterine.</i> Wound in median line. Foetus at once delivered, and found by side of mother.
17	June 27, 1876	Van Buren, Indiana.	Drs. L. and E. J. Corey.	Wife of farmer, 35; strong; weight 135 lbs.; 10 weeks pregnant.	Cow	<i>Abdominal.</i> Wound 5 inches, obliquely upward and outward from pubes; omentum wounded, uterus not.
18	Nov. 11, 1881	Pamplona, Navarra, Spain.	Drs. Cabezudo and Antonio Martin Ayuso.	Servant, 25; in good condition; 6 months pregnant.	Ox	<i>Abdominal.</i> Wound in right inguinal region $3\frac{1}{2}$ inches long; intestinal eventration size of adult head, and soiled with stable manure.
19	Nov. 16, 1881	Billings, S. W. Missouri.	Dr. Joseph Z. Scott.	Mrs. Piskulla, 8 para, near full term.	Ox	<i>Abdominal and uterine.</i> wound from anterior superior spinous process to umbilicus.
20	April 1, 1888	Celaya, State of Guana-juato, Mexico	There were three surgeons in charge of the wounded, who were computed at several hundred; and the dead were removed with little examination.	Not Stated.	Fighting Bull	<i>Abdominal and uterine.</i>

Result to woman.	Result to Child.	Remarks.	References.
Recovered	Carried 98 days longer and born alive.	Woman sixty-five days under medical attention; was delivered on September 11, 1853.	Communicated by Dr. Wm. A. Elder, of Bloomington, Dec. 9, 1890.
Recovered	Carried to maturity and born alive.	Uterus presented contused spots. Abdomen sutured with a darning needle and black thread, after intestines were washed free from dirt and returned.	Communicated by Dr. Wetmore, Jan. 9, 1886.
Recovered	Carried no doubt to maturity.	Woman in hospital twenty-five days. Fœtal heart-sounds distinctly heard at time of discharge.	Madras Quarterly Journal of Med. Sci., vol. vii., 1867, p. 409.
Died	Lived. Grew to manhood, and probably is alive now.	Woman never rallied from the shock, and died in an hour and a half. Her clothes were not torn.	Medical Record, New York, vol. ii., May 15, 1867, p. 148. Communication of Dr. Marsh. Nov. 1888.
Recovered	Lived. Boy, named "Dioadato;" was often seen with his mother in Orizaba.	Woman injured on way to market her fruit. Abdomen and uterus both sutured with silk. Woman lived in good health some twenty years.	Communicated through Prof. Federico Semeleder, of City of Mexico, by Dr. Juan Kremser, of Orizaba, Sept. 1891.
Recovered	Carried to maturity of pregnancy, 202 days, Aug. 18, 1876. Mother and girl well in May, 1878.	The omentum, most of the small intestine, ascending transverse, and descending colon, with the pyloric end of the stomach, protruding.	American Practitioner, vol. xviii., 1878, p. 151-154.
Recovered	Carried to maturity, and born alive.	Wound treated aseptically under chloroform; required four hours in restoring intestines and dressing; healed in sixty days. Went to a Maternity to be delivered.	La Clinica Navarra, Feb. 17, No. 5, 1888, Feb. 27, March 4, Nos. 6 and 7, 1888.
Died	Lived. A girl; was alive and well in December 1889.	Child was extruded through the wound in half an hour; placenta extracted through it. Woman died of shock and hemorrhage in fifteen hours after injury.	Medical Age, Detroit, vol. iii., Aug. 10, 1885, No. 15, p. 341. Communicated by Dr. Scott, Dec. 16, 1887.
Died at once	Died.	The woman was far advanced in pregnancy, and was at a bull-fight. The building took fire, the arena was broken, the bulls encountered, the crowd, and the general <i>melée</i> cost the lives of nearly a hundred people.	Communicated by Professor Federico Semeleder, April 28, 1891, and Nov. 24, 1891.

with the injured woman after the accident until he reached the age of thirty-three years. Not having been educated in medicine, his Latin account of the case is somewhat confusing, but enough can be learned from it to give its true character, and establish the fact that it is one of the most remarkable recoveries in history, comparing favorably with the picket-laceration under the care of Dr. Bradbury already given. We find that in the dressing of the wound, the barber-surgeon washed the eventrated parts free from mud with warm milk, and placed the patient with her feet elevated above the level of her head to favor the replacement. She is represented as having been of remarkable nerve and endurance. Crusius as a historical writer bears a high reputation, and his works are scarce and costly.

Case 2 of table differs from the above in the fact that the uterus was torn open, and the foetus tossed out. The woman having been twice gored, and by the horns of a young bull, was more severely injured internally than has been the case with the average of horn-ripped women torn open by the longer and thinner horns of the cow. Although her intestines were thought not to have been lacerated, she had stercoraceous and bloody emesis, and bled from the abdominal wound for twelve hours. The case is well authenticated in Holland. Zaandam is but a few miles from Amsterdam, across the Y.

Case 7 of table. This being here reported for the first time, is given in full:

"About the year 1830 or 1832, Mrs. Juana Gonzalez de Cavazos, living in the small town of China, State of Nuevo Leon, republic of Mexico, being pregnant, went to milk a cow, as she was accustomed to do every day; the animal gave her a horn-thrust that ripped open her abdomen and womb to such an extent that a male child was immediately expelled through the wound. This was the lady's third or fourth child, and was given the name of *Liberado* (the liberated). He lived over fifty years.

"Mrs. Gonzalez de Cavazos belonged to a family of Spanish blood; lived in good circumstances, and was remarkable for her masculine character and fortitude, of which she had given other proofs besides the following. When the people of the house, knowing of her accident, among them two grown daughters, came running and crying, Mrs. Cavazos asked for brandy to wash her wound, sewed up the rent, and walked by herself to her bedroom.

"We received these facts from the señora herself, who, after this accident, had three more children, who are still alive. There live in

the town of China several persons who were eye-witnesses of the event, and have related and confirmed it to us, with all the particulars we have mentioned. We are both distant relatives of Señora Cavazos.

"We make this statement, and sign it at the request of Dr. Semeleder, in the City of Mexico, Federal District, on the twenty-third day of September, 1891.

"NARCISO DAVILA, Senator for the State of Nuevo Leon.

"JUAN DE DIOS VILLALON, paymaster of the first class in the Treasury Department.

Case 16 of table. This is also reported for the first time, and is the third Cæsarean horn-rip of Mexico which resulted favorably to mother and son :

"Maria Martina Crescencia, twenty-six years old, wife of Pablo de la Cruz, both Indians, living in a small village called Tlilapam, inhabited almost exclusively by Indians, half a league beyond the hacienda of Jalapilla, which is near Orizaba ; being the mother of several children, and in her eighth month of pregnancy, was, during the last week of June, 1867, on the fields of said hacienda, going to Orizaba to sell a basket of fruit, about eight o'clock in the morning, assaulted by a bull, who ripped open her abdomen in the median line, and her womb, also, so that when the mother fell to the ground, next to her and on her right side the child was found lying. Mother and child were taken to a straw hut near by, and a few minutes later D. Manuel Maria Fernandez, my friend, passed by. He extracted the placenta through the rent, washed the woman with water, and sewed her wounds (abdomen and womb) with red silk, not disinfected, that was on hand, and ten days afterward the woman walked home.

"The baby was baptized immediately by the name of *Diosdato* (Godgiven) de la Cruz. The Indian woman lived in health some twenty years longer, taking her fruit for sale to Orizaba as before, where she used to sit on one of the corners of the fourth principal street, generally accompanied by her boy, Diosdato, and I saw her often at her place.

"The accident was related to me by Don José Manuel Eizaguirre, senior of the apothecaries of the State of Vera Cruz, and by other persons—among them, in 1870, by Don Augustin Rojas, watchman of the above-named hacienda, who was an eye-witness of the accident, as he arrived just in time to frighten away the midwife-bull, who was about to attack the poor woman a second time.

"Don José Manuel Eizaguirre is still alive, and in possession of all his intellectual faculties; he, as well as Don Augustin Rojas, when I had read to them the present account, declared themselves willing to be produced as witnesses.

"DR. JUAN KREMSEK, Orizaba."

Case 20 of table. All efforts made have failed to obtain particulars as to the exact character of the injuries inflicted by the bull upon this woman, who was one of the crowd of panic-stricken persons endeavoring to escape. So many were hurt that the three physicians of the town were engaged for a number of hours in attending to them, and little notice could be taken of those already dead. One statement makes the killed nearly three hundred, and is to the effect that they were carried away in wagons to be buried.

NATURAL DEDUCTIONS—The surgical world has been long in error as to the proper measure of danger to be encountered in the Cæsarean operation, and had the horn-rip cases of this paper been collected twenty years ago, down to No. 17 inclusive, it must have much surprised the operators of Europe and America to consider their results in contrast with the best work done under the knife. The much better results now attained by the obstetric surgeon, particularly in Germany and Austria, has a tendency to diminish the measure of our surprise at those recorded of the work of horned ruminants; but we are led even now to ask ourselves two very important questions, viz. : 1. Why did so much larger a proportion of women recover after the horn-Cæsarean rip than after a delivery by the knife, under the old method of operating that prevailed up to the year 1876? 2. Was it the mode of operating with the knife, the condition of the subject at the time of her delivery, or both in combination, that made the difference of results? As we must admit that the knife is much the better instrument of the two, and is capable of performing its work with much less shock to the system, we must also admit that an operation before labor is likely to be much better borne by the woman than in the state of exhaustion produced by its long continuance. We believe that the secret of success in horn-ripped and other lacerated cases lies in the fact that the subjects were healthy and in good physical condition when forced to endure the shock of a violent abdominal injury. Had one of these women been already under the effects of labor-exhaustion, her death would, no doubt, have followed.

The labor and time expended in collecting together the cases of injury presented in this paper will have been spent in vain, if they are

to be regarded simply in the light of marvels or curiosities in obstetrical literature. They were certainly not collected as such, but to establish indisputably certain points of belief long held by the writer, and repeatedly contended for: that the Cæsarean operation should not be regarded *per se* as a very dangerous surgical procedure, and should not be held in the dread with which it was long contemplated, and which was a potent factor in forcing it to assume a character which properly belonged to its performance as a "last hope." I have also believed for the past eleven years, and am confirmed in the opinion by many tests made by Philadelphia operators during this period, that the cases must be very exceptional in which it will not be safer to the woman to have her operation performed shortly before labor than after it has begun, unless, in the latter event, very little time is lost in preparation. Certainly the Mexican record of Cæsarean casualties teaches the value of ante-partum cœlio-hysterotomy. Under the knife, Mexico has had one *old* Cæsarean operation (1877)—woman saved, child dead; and one Porro operation (1884)—woman lost, and child saved. The woman lost was a rhachitic, deaf and dumb, dwarf, and died in twenty-eight hours from shock.

In ante-partum Cæsarean operations it may be well to anticipate any possible risk of uterine quiescence by giving a hypodermic injection of ergotin half an hour before the operation is to be commenced. Second operations on the same subjects are rarely fatal if well managed, but the dangers of hemorrhage from the placenta presenting in the line of incision are increased because of utero-abdominal adhesions leading to atony; and this risk will not be entirely avoided, even if the woman is fully in labor. History, however, shows that the danger is rarely insurmountable, and that women have recovered after as many as four,¹ and even six² cœlio-hysterotomies, although no uterine sutures were used. Since the introduction of the Säger method, as many as three operations have been performed upon the same woman, with safety to her and the three children.

¹ Frau Adametz—three out of four children saved. (*Neue Zeitschrift für Geburtsskunde* vol. v., 1837.)

² Madam Godard, of Menil, under Dr. N. Guillet, of Milly. She died undelivered in a seventh labor, after the death of Dr. Guillet. (*Roonhuyzen's Medico-Chirurgical Observations*, 1662.)

CASES OF HÆMATO-SALPINX AND HÆMATOMA
RESEMBLING ECTOPIC GESTATION.¹

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The present, more perhaps than any previous age in the medical world, seems to be characterized by ambition for long series of operations; nor is this confined to what might be called the younger members of the profession, for we see, apparently fired by the same ambition, men whose heads are gray and whose fame is far-reaching.

Just as Appendicitis among the general surgeons has of late held the honor of being the popular condition for operation, so, among the gynæcologists, cases of ruptured ectopic gestation may be said to have held a similar position.

Even the most conservative must allow that there is marked pleasure in saving by operation, patients on the verge of death from internal hemorrhage, and the writer admits that he has not been absolutely free from the prevailing ambition for a large experience in operations of that variety. Such being the case, while preparing a paper a few weeks ago on "Operative Experience with Ectopic Gestation," for the Orange Co. Medical Society, I was somewhat disappointed to find that my cases, then almost a dozen, resembling ectopic gestation, when studied under the light of the microscope and careful investigation, gave me only six (since increased by one), that I could honestly say were undoubted examples of that condition.

Feeling that my experience must be paralleled by that of many others, and believing that cases are reported as ectopic which are open to doubt, it seemed best, when unexpectedly asked for a paper before this society, that I should present my doubtful cases and ask for a discussion of the same.

Before proceeding further, I should like to state that in the use of the terms "Hæmato-Salpinx" and "Hæmatoma," I mean by the former simply a collection of blood in the tube, and by the latter, an effusion of blood between the folds of the broad ligament without in either case implying a source or cause of the hemorrhage.

¹Read before The New York Obstetrical Society, December 6, 1892.

The patients were all operated upon by me at the Roosevelt Hospital and with the assistance of the house staff of that institution.

Case I. Mrs. Z., æt. 43; native of Syria, admitted to the Roosevelt Hospital August 23, 1889. She speaks neither English, French nor German, hence her history is very incomplete; seems to be in pain.

Vaginal examination shows a hard mass behind and to the right of the uterus.

Temperature on admission, 100.5; pulse, 80. Patient had a rise of temperature for several days.

August 28th. Abdominal section; mass ligated in section and removed. It had the gross appearance of a gestation-sac and was so diagnosed at the time, but examination of the contents showed only blood-clots. During the operation the vermiform appendix was removed as it appeared diseased.

September 5th, eight days after operation, the patient passed three feet of tape-worm.

Patient made a good recovery.

It was thought before operation that the temperature was due to the pelvic mass and this was one of the reasons for the operation, but as it continued for some little time after operation and finally responded to anti-periodic measures, it was probably of malarial origin.

This case of itself has little value, as the previous history was negative. It is only cited as one resembling an ectopic gestation in gross appearance, but in which the positive proofs were not present in the sac.

Case II. Mrs. H. F. Æt. 30. Admitted to the Roosevelt Hospital, Sept. 11, 1889. Has been married ten years; has had four children and no miscarriages; last child two years previous. Menstrual history normal in frequency and amount, but painful. Last menstruation ten days ago. Present illness began nine months ago with pain in left iliac region, increased at menstruation and continuing until the present. Examination on admission revealed a firm, sensitive mass at the left of and behind the uterus.

Sept. 13th. Abdominal section. The mass was ligated in section and removed. The outer half proved to be the left ovary and tube the latter markedly distended with blood, and looking like a gestation-sac, but found on examination to be a hæmato-salpinx with retained menstrual blood, for to my surprise the remaining half of the mass proved to be one horn of a uterus bicornis. The cavity of the amputated horn had no communication with the canal of the cervix: thus we

had a hæmato-metra and hæmato-salpinx resulting from an atresia. Patient made an easy recovery.

Case III. Mrs. B. *Æt* 26. Admitted to the Roosevelt Hospital, Sept. 19, 1889. Has been married three years; has had two children and no miscarriages; last child born eight months ago. Previous menstrual history normal; last regular period occurring July 4th. July 14th patient had severe pain in lower part of abdomen, felt faint, and began flowing. This flow has continued till the present, seven weeks in all. This was the story given by the patient before operation.

Examination showed a large mass on the right side of the uterus, and bulging downward. Patient was evidently septic. Temperature, 102; pulse 110. September 20th. Abdominal section. The mass was found to be a hæmatoma, with coils of intestine adherent all over the surface. The mass was then incised from the vagina, emptied of a large number of very foul-smelling blood-clots and drained. The case at the time of operation was considered one of ectopic gestation, but only blood-clots were found, and close investigation of the early history of the patient's illness revealed the fact that at the time of her first sharp pain and feeling of faintness, she was hanging out clothes upon the roof and made a misstep. This explains the case, I think, as one not of ectopic gestation but of pelvic hæmatoma from the rupture of one of the vessels between the folds of the broad ligament. The patient made a prompt recovery.

Case IV. Mrs. L. *Æt* 24. Admitted to the Roosevelt Hospital, August 10, 1891. Has been married two years; never pregnant. For the last four years has had pains, at intervals, in the left iliac region and her menstrual periods have been irregular, patient going four and a half to seven and a half weeks without menstruating. Her menstruation appeared normally in May; none in June. In July, eight weeks from her last period, she noticed a dirty brownish discharge, and this has continued until the present. She has several times passed clots of blood preceded by crampy pains. One week before admission she had an attack of very severe pain, vomited and fainted; this was repeated in three hours. After this the patient improved but still had pain. On the right side of the uterus, an elongated doughy mass could be felt.

After the employment of numerous palliative measures, with but little benefit, abdominal section was performed August 26, 1891. The mass on the right side proved to be a hæmato-salpinx containing

organized blood-clots. The left appendage was also found diseased and removed. The hæmato-salpinx was thought, at the time, both by the operator and by spectators, an example of ectopic gestation, but a careful examination by the pathologist showed only blood-clots and a salpingitis.

I am sorry to say that the result of the operation was unfavorable, as the patient died on the eight day. At the time of her death I consoled myself with the thought that she died of nephritis, as her urine was markedly diminished for several days after operation, and contained albumen and casts, but a careful study of her temperature, pulse and urine, convince me that she probably died of sepsis, the source of which I know not, and that her nephritis was a result of her sepsis.

Case V. Mrs. B. *Æt.* 22. Admitted to the Roosevelt Hospital, July 27th, 1892. Has been married two years; has had one child five and a half months ago, the child dying on the third day. Since the birth of child, menstruation has been regular till two months ago, when she flowed for twelve days instead of the usual five. This flow appeared just 28 days from her last menstruation. After an interval of a few days the flow returned and she has suffered with menorrhagia and metrorrhagia until the present, now two months in all. She has had no attacks of pain.

Examination disclosed a firm mass on the right of the uterus and posterior, pushing the uterus somewhat to the left.

August 1st. Abdominal section and removal of the right appendage.

The mass was a hæmato-salpinx and resembled an ectopic gestation-sac, but here again we could find no proof of it. I made sections from a number of places in the sac and contents and a number of slides from each section, but could find only blood-clots and the tubal mucous membrane. Not satisfied with relying on my own examinations, I showed my slides to several pathologists, but with the same result; we could only call the case a hæmato-salpinx. The patient made a rapid and perfect recovery.

Case VI. Mrs. C. *Æt.* 23. Admitted to the Roosevelt Hospital Oct. 30th, 1892. Has been married six years; has had two children and two miscarriages. Her last miscarriage occurred May 30th, 1892. Three months after miscarriage, or two months before admission, she began to have crampy pains in the lower part of her abdomen; at first only occasional, then more frequent. Up to this time her menstruation had been normal, but since then she has had menorrhagia and metrorrhagia. She had gone six days past her time for menstua-

tion when she had her first attack of pain, felt faint, and began to flow. The patient says that a fortnight previous to this, she had felt badly "all over" after diving at the seaside, but had very little pain then. Examination on admission showed, on the right side of the uterus, and somewhat posterior, a large sausage-shaped mass.

November 5th. Abdominal section. The mass on the right side proved to be a hæmato-salpinx and was removed; also the left appendage which was diseased. The hæmato-salpinx had the gross appearance of an ectopic gestation-sac, but here again neither the pathologist of the hospital nor myself could find any evidence of impregnation.

The patient made a prompt recovery.

Regarding some of the cases the writer admits that he cannot positively exclude ectopic gestation and yet he has failed to find proof of its presence even after the most careful search, and that too when prejudiced in favor of finding it. Case IV gave perhaps the clearest history of an ectopic gestation, as she had gone for eight weeks without menstruating, and at the end of three months had an attack of sharp pain, faintness, etc., so frequently seen in that condition. If we study the history of the case, however, we find that on previous occasions she had had periods of amenorrhœa of as long as seven and a half weeks' duration, so that the postponement of menstruation in her present illness was only three or four days longer than had occurred before, and if pregnant for a period at all commensurate with the duration of her amenorrhœa, it certainly seems probable that we should have found either a foetus or chorionic villi, as the blood clots were encapsulated and they and the sac were carefully preserved.

Before accepting the probability that the cases of the above series were not those of ectopic gestation, we must first decide the question as to the possibility of a hæmato-salpinx apart from the presence of an ectopic gestation. The writer from his own experience must answer this in the affirmative, nor does he stand alone. Galabin, at a meeting of the Obstetrical Section of the British Medical Association, July, 1892, says: "If there is no embryo, no obvious placental tissue, and merely a mass of clot distending the tube, or extending out of it, the opinion of microscopists might possibly differ as to the recognition of very scanty traces of chorionic villi amongst the clot. At any rate I have been convinced from my own experience that such a clot may be formed in a Fallopian tube, with open extremity, without any extra-uterine foetation at all."

¹British Medical Journal, August 6th, 1892.

Again, Bland Sutton at a meeting of the Medical Society of London, November 7th, 1892, makes the following statement¹: "Every blood-clot in the tube is not necessarily a tubal mole, for it is certain that blood-clot may be present in the tube apart from pregnancy."

There certainly was a similarity in the symptoms of most of the above cases and those of ectopic gestation, especially in menorrhagia and metrorrhagia, and yet we find it just as marked in case III as in the others, and here the condition was that of a hæmatoma, caused in all probability by the misstep and fall upon the roof. Furthermore we have probably all seen cases with menorrhagia and metrorrhagia associated with a tube distended with serum or pus.

There was one feature presented in a number of these cases which is certainly not the rule in ectopic gestation, *i. e.* a recent pregnancy. Three of the six cases had been pregnant within nine months of their admission to the hospital; one, five months before; another, five and a half; another, eight; and from one case we could get no previous history.

Concerning the cause of hæmato-salpinx or a hæmatoma, apart from the presence of an ectopic gestation, we are still very much in the dark. It seems fairly clear, however, that of the above six cases, in one the cause was atresia, in another a misstep, and in the last case it seems perfectly possible that the diving at the seaside, although it preceded by a fortnight the onset of the acute symptoms, may have been the cause of the hæmato-salpinx found at the operation. The presence of a recent pregnancy in some of the cases suggests also a possible cause in subinvolution or congestion of the tube.

For the other cases I can assign no definite cause, but that a hemorrhage should occur from the mucous membrane of a tube the seat of a chronic inflammation or congestion does not seem at all improbable, the exciting factor being perhaps a traumatism so slight as to be unnoticed or forgotten.

In conclusion the writer believes that most of the cases of hæmato-salpinx and hæmatoma are due to the presence of an ectopic gestation, but in many cases no proof of that condition can be found, and some are in all probability due to other causes; furthermore that the cases in which we can find neither fœtus, chorionic villi, nor decidua, should in the present state of our knowledge, not be reported as cases of ectopic gestation.

62 West 50th Street.

¹British Medical Journal, November 12th, 1892.

INTESTINAL PARALYSIS FOLLOWING LAPAROTOMY.

BY EUGENE BOISE, M. D.

Grand Rapids, Mich.

IN February, 1892, I was called to see Mrs. B. S., aged 26 years, married, mother of two children. I found her suffering from retention of urine by reason of pressure of an intra-pelvic mass of exudate which surrounded the uterus and held it firmly fixed.

I had attended her during two similar attacks of so-called pelvic cellulitis, the last one only three or four weeks previously, but this seemed worse than either of the others. At my suggestion she was removed to St. Mark's Hospital, and treatment by hot douches and glycerine tampons instituted to promote absorption of the exudate. This was gradually, but not fully, accomplished—two hard masses on either side of the uterus remaining.

Laparotomy was advised, consented to and performed early in March, Drs. Peterson and Earle of this city assisting. For various reasons there was not time for the usual thorough preliminary preparation, but the bowels were fully evacuated by castor oil and an enema before the operation. She also had the general bath as well as the local corrosive bath to the surface of the abdomen, and the usual thorough preparation at the time of the operation. On opening the abdomen, the pelvis was found to be a mass of adhesions. The right ovary and tube, prolapsed, were finally separated and lifted out, the hæmorrhage from the torn adhesions being quite free. The ligature, crossed, was applied to the pedicle, tied securely, and the mass removed.

On seeking for the left ovary, neither Dr. Peterson nor myself could find it, the adhesions were so dense and firm. I therefore contented myself with dissecting out as much of the tube as possible, beginning at the uterine extremity and ligating beneath it with a series of sutures.

I removed about two inches in this way, but left the ovary. No pus was found in this tube, but when the right tube was freed from its adhesions, a slight quantity of pus escaped. The abdomen was thor-

oroughly flushed, and the wound closed, no drainage being used. She rallied well from the operation, but was troubled very much with vomiting and severe abdominal pain. The bowels gradually became distended with gas, and the stomach refused to be quieted.

Although the temperature was not high, and the character of the pulse was good, I feared peritonitis, and attempted to move her bowels by means of sulphate of magnesia in repeated doses, but with no effect except aggravation of the stomach symptoms. Enemata were then resorted to, turpentine and castor oil, ox-gall, large quantities of water administered through the long tube, concentrated solution of salt, etc., but with no result. There was, however, constant regurgitation from the stomach, with some abdominal pain and increasing tympanites. The patient was seen by Dr. Etheridge of Chicago at this time, who concurred in the diagnosis of intestinal paralysis, and predicted death within twenty-four hours.

All active measures were stopped, and one-quarter grain morphine administered hypodermically. This was followed by cessation of pain and vomiting, with rest to the patient. The administration of another enema after the lapse of several hours was followed by copious, free and offensive discharges: so free and frequent as to be entirely involuntary. From this time the patient recovered, but developed a pelvic abscess on the left side which was opened through the abdominal wall, packed with gauze, and gradually healed. The patient is now enjoying good health.

In this case, notwithstanding the most faithful efforts of the nurses, in attendance, and the untiring efforts of our most efficient Superintendent of Nurses, the bowels could not be moved till after the administration of the morphine. This was followed by sudden and active re-establishment of normal peristalsis—the intestinal paralysis being relieved.

By intestinal paralysis I mean a refusal (if I may so term it) of the muscular fibres of the intestines to act under the ordinary stimuli.

After my experience with the foregoing case, I naturally began to wonder how this paralysis is occasioned, what it depends upon, and how it can be avoided. And in order to gain a foothold for reasoning, I was carried back to study the anatomical distribution of the nerves of the intestines and their physiological action. I shall be unable in this article to discuss these matters thoroughly, but only enough to enable me to explain the conclusions to which I arrived, which conclusions are based simply on such experimentation as may obtain in

the course of various laparotomies, together with the recorded results of the experience of others.

Intestinal peristalsis is the name given to that rhythmical contraction of the circular and longitudinal muscular fibres of the intestines by which their contents are propelled. It is induced by stimuli which act from within or from without the intestinal tube, and may be very various in origin. But whatever the character of the stimuli, they are almost invariably transmitted to the intestinal muscles through the medium of certain branches of the sympathetic system of nerves. Yet some agents (as nicotine, muscarine, etc.) may directly excite the muscular fibres themselves. In other words, intestinal peristalsis depends upon certain nerve impulses which, whether they originate in the brain, spinal cord, cerebro-spinal nerves, or the sympathetic system itself, reach the intestines through the medium of the sympathetic system.

The nerve supply of the small intestine is derived principally from the superior mesenteric plexus (sympathetic) which surrounds and accompanies the superior mesenteric artery, and is formed by fibres from the coeliac plexuses—semi-lunar ganglia, and pneumogastrics. Branches are also received by the intestine directly from the pneumogastrics and the gastric and coeliac plexuses.

The colon derives its nerve supply almost entirely from the superior and inferior mesenteric plexuses. The rectum from the inferior mesenteric and hypogastric plexuses (sympathetic), with branches from the sacral plexus (cerebro-spinal).

The fibres from these various plexuses enter the intestinal walls and sub-divide and anastomose forming a close ganglionic plexus known as Auerbach's, whose branches form a close network of smaller ganglionic plexuses situated in the muscular coat of the intestine and completely surrounding it. There is also formed, from branches of Auerbach's plexus, another finer plexus situated beneath the mucous coat of the intestine whose fibres surround the glands, traverse the villi, and become lost in the mucous membrane. This plexus is known as Meissner's, and is supposed to preside especially over the function of intestinal secretion, while Auerbach's plexus is more especially concerned in the production of motion, peristalsis. The action of this (Auerbach's) plexus may be increased or decreased according to the nature of the impulse received, which impulse may be transmitted through various channels. It may be applied directly to this plexus, as is shown by the production of peristalsis when there is mechanical

irritation of the intestinal surface, whether from within or without, the mesenteric connection being severed, and all other nerve supply cut off. Or it may be received through the medium of other nerves, according to their distribution.

The most frequent cause of peristalsis is mechanical in nature, by the presence of fecal matter in the intestinal tube, or its moderate distension by gases, and in this case the stimulus probably acts directly upon the parenchymal plexus itself. An empty intestine is generally quiet.

But other causes of peristalsis may be reflex in character and very various in nature, chemical, thermic, electrical or nervous. And may, as I have said above, originate either in the brain, spinal cord, spinal nerves, or in the sympathetic system itself.

That an impulse originating in the brain may be so transmitted as to cause increased peristalsis, is evidenced by the well-known influence of sudden fear in producing diarrhoea.

Lauder Brunton cites cases of ovarian neuralgia which caused constipation, and in which the administration of small doses of morphine, by allaying the irritation, caused free movements of the bowels.

Again, in colic, the application of extreme heat to the surface of the abdomen allays the pain by modifying the severity and irregularity of the peristalsis.

Brunton and other experimenters have found that the activity of the peristalsis is largely dependent upon the relative proportion of oxygen and carbonic acid in the blood: that is, that a relative increase of venous blood promotes peristalsis, and conversely, excess of oxygen decreases it.

Irritation of the sympathetic plexuses in the mesentery, as in other parts of the body, causes contraction of the arteries with consequent diminution of oxygen and relative excess of venous blood. By this, peristalsis, more or less violent, is excited. Continued or too violent irritation of these nerves soon exhausts the contractility or excitability of the muscular fibres, and their action is suspended—a condition of paralysis—the muscular tone is gone and the intestines become distended with gas. This paralysis soon passes away on the subsidence of the irritation, or when the vascular equilibrium is restored. But long-continued or too violent irritation may cause fatal paralysis.

There is another condition which in its symptoms and results simulates true intestinal paralysis, that is, tonic contraction of a portion of the intestine, as described by Dr. Ashton, of Philadelphia, in a paper

read before the gynæcological section of the American Medical Association at its recent meeting in Detroit.

This may cause fatal obstruction, as truly as intestinal paralysis, and like intestinal paralysis, is caused by hyper-irritation of the sympathetic nerve fibres. While all involuntary muscles normally act rhythmically, they are subject to irregular, and tonic contractions, as witness the heart, which becomes irregular or even stops in a state of tonic spasm under too violent stimulation. Or the uterus, in a state of hour-glass contraction. So the muscular fibres of the intestine may be thrown into tonic contraction by over-excitation.

There is also a third explanation of the phenomena grouped under the name of intestinal paralysis. It has been demonstrated by various experimenters that the splanchnic nerves possess true inhibitory powers over the small intestine, whose movements are increased, decreased, or entirely abolished by irritation of this nerve, according to the degree of severity of such irritation. It is therefore fair to infer that there are fibres supplying the lower part of the colon and the rectum whose function is likewise inhibitory, irritation of which will produce paresis of that part of the intestinal tract, independently to a greater or less extent of the vascular conditions.

But whether such fibres exist or not the fact remains that over-excitation of the sympathetic nerves supplying the intestine, may cause that train of symptoms which we attribute to intestinal paralysis. And the natural remedy would be some agent that will allay the hyper-irritation.

The one remedy which meets these indications is opium in some form, as this is a true *sedative* to the nerve centres. It allays irritation of those centres, and by this means relaxes the arterioles, allowing a relative excess of oxygen, and thus decreasing peristaltic activity.

So that in all of the above-mentioned conditions (each one being caused by over-irritation of the sympathetic nerves), opium would be the remedy indicated.

Now in the performance of a laparotomy for pelvic disease, the conditions certainly obtain which favor extreme irritation of those nerve centres which control peristalsis.

The exposure to the air and the necessary handling of the intestines, the more or less forcible separation of adhesions, the frequent injury to the pelvic walls and ganglia, the traction on the various organs, and finally the ligature which constricts the pedicle—all are irritant in their nature, and very naturally influence peristalsis. But whether it be by

direct injury to the parenchymal ganglia of the intestinal walls, or through the medium of the afferent sympathetic fibres, vaso-motor or inhibitory—or finally, whether it be by injury to sensory cerebro-spinal filaments which is reflected through the plexuses to the intestinal fibres, is a matter of minor practical importance. The practical question is as to the remedy.

In accordance with these views, I venture to offer the following suggestions:

I. That there shall be free and thorough preliminary evacuation of the intestines by means of calomel, or some agent which will carry out the idea of intestinal antiseptics as fully as possible.

II. That there shall be as little exposure and handling of the intestines as possible.

III. That the manipulations in the pelvis shall be conducted with as little violence as is consistent with thoroughness, and as rapidly as may be; but I wish to protest against this habit of publishing the exact time of the various steps of an operation, as I think it tends to foster an unwise emulation whereby safety is liable to be sacrificed to speed.

IV. That after the patient is placed in bed, a full dose of some opiate (preferably codeine or suapnia) be given hypodermically and repeated if necessary, in order that the pain, which is so constantly present during the first twelve or fourteen hours, may be relieved, and that the undue irritation of the nerve fibres, and consequent painful peristalsis (which I believe to be largely the cause of this pain) may be abated.

By this means I believe that excessive and spasmodic contraction of the muscular fibres and their consequent exhaustion will be avoided. By this means also the severe irritation of the inhibitory fibres through which aperistalsis is occasioned, will be avoided. The intestines will also be in a more favorable condition to respond to saline laxatives if their use shall be indicated. The objection that the administration of opiates after a laparotomy masks the symptoms, promotes adhesions and tends to favor sepsis, will not hold good as against this early use of codeine.

While my own experience has been so limited that I am not yet able to draw reliable conclusions as to actual results, I still believe that we may thus avoid almost entirely that very serious sequel of laparotomy—intestinal paralysis.

But if intestinal paralysis shall already have supervened, I still believe that a free hypodermic injection of codeine will be of great

benefit in allaying existing nervous irritation, after which the administration of stimulant enemata may provoke peristalsis. If the intestines are greatly distended, that of itself impairs the contractility of the muscular fibres. In such case the long rectal tube should be used to give escape to the imprisoned gas. If this fails, it is good practice to re-open the abdomen, and, protecting every exposed surface by sterilized towels, make an opening into the bowel sufficiently large to allow of the free escape of the gas.

This may then be closed with lembert sutures and the intestine be returned to the abdominal cavity.

When the diagnosis of intestinal paralysis is once established, all efforts at purgation should cease till some hours after the administration of the sedative.

I am aware that this review of the subject is sketchy and imperfect, but that it outlines the groundwork of the correct pathology and treatment of intestinal paralysis following laparotomy, I believe.

A PLEA FOR A JUST ESTIMATE OF THE VALUE OF ELECTRO-THERAPEUTICS IN GYNÆCOLOGY.¹

BY HIRAM N. VINEBERG, M. D.

It was my intention in this paper to give a full resumé of the results obtained by electricity in pelvic affections, and to endeavor to draw a just deduction of the value attaching to this agent. But I found the literature of such vast proportion and my notes grew to such an extent that the time at my disposal to-night would cover only a small fraction of the ground. I have therefore to content myself with the presentation of some data, which in my opinion are fairly representative of both sides of the question, and to state my own results with as much impartiality as may be expected from one who claims to be neither an enthusiast nor an opponent of electro-therapeutics.

Fibro-Myomas of the Uterus. There the weight of evidence is decidedly in favor of the view that electricity ranks as a palliative

¹Read before The New York Obstetrical Society, December 20, 1892.

measure only. But the vital question for solution is, to what extent does it fulfill this rôle without immediate danger to the patient and without lessening the chances of recovery from a subsequent surgical operation should this be found necessary. The first part of the question is easily decided, but the latter part will require careful and unbiased observation in the future on the part of all concerned. In determining a point of this nature the *post hoc ergo propter hoc* reasoning has certainly no place. Unfortunately this is a form of reasoning frequently adopted by the opponents of electricity. It is well known that fibroids are prone to undergo various degenerations and suppuration; and to form adhesions with surrounding tissues when left entirely to themselves. In analyzing three hundred and fifty-six cases of fibromyomas, operated upon at his clinic, Dr. A. Martin¹ finds that thirty-three or over nine per cent. showed marked degenerative changes, and twenty cases or five and six-tenth per cent. had undergone suppuration. The percentage of adhesions is great as every operator knows. It is therefore manifestly unjust to attribute every case of degeneration, suppuration or adhesion in cases that had been previously treated by electricity to the deleterious influence of the treatment. But as we will show later a greater injustice than this is occasionally perpetrated, as when a death undoubtedly caused by another agent is put down against Apostoli's method.

A. Martin and Mackenrodt (a) some months ago presented statistics on the results of Apostoli's method in the treatment of fibromyoma the most unfavorable of any published thus far by gynecologists of note. The statistics they give deserve therefore the most careful consideration. They embrace sixty-six cases in all, divided up as follows:

(a). Thirty-six cases treated in Martin's clinic in accordance with Apostoli's rules.

(b). Sixteen cases treated elsewhere and operated upon afterward in the clinic.

(c). Fourteen cases treated elsewhere came for advice but not for operation.

The first group only is given in detail. Of these thirty-six cases in twenty (55.5 per cent.) with small myomas a relatively good result was obtained, or what the authors are willing to concede as a symptomatic cure; eight of these were permanently cured, and twelve had a return of their symptoms after a variable time.

The remaining sixteen cases (44.5 per cent.) were made worse by

¹Deutsch. Med. Woch., 1892. No. 2.

the treatment, and of these three died, according to the authors, as a result of it. I will give the reports of the three deaths in the author's own words.

Case I. Frau S. Æt. 50 years. Multiple myoma. Uterus, size of double fist. Profuse hemorrhages. Apparent improvement after eighteen *séances*. Then treated with hot douches and hydrastis during menstrual flow: three months later a relapse of the old symptoms. Rapid increase of anæmia. Patient lost so much blood after five *séances* of electricity that they had to do an *abrasio mucosa* which was followed by an intra-uterine injection of liquor ferri and tamponning of uterus to arrest hemorrhage. Apparent convalescence. On the twelfth day embolus of the arteria pulmonalis. Immediate death.

Case II. Frau E. Large tumor. After twenty-five *séances* a high degree of fever set in, softening the tumor, *coeliotomy* to remove the suppurating tumor. Patient died on the following day.

Case III. Frau G. After seventeen *séances*, fever, softening of the growth. Declined operation. Peritonitis. Death in three weeks.

Is any comment necessary on the first case? The death could not possibly have been due to the electrical treatment, but the probability that it was due to the intra-uterine injection of liquor ferri is very strong. It is strange that in the face of the numerous cases of reported death due to the intra-uterine injection of liquor ferri, (Chrobak alone has recently collected eighteen cases), we should find anyone resorting to it.

As the operation of *coeliotomy per se* for the removal of a uterine myoma is attended with a high mortality—A. Martin¹ in two hundred and thirty-one cases had sixty-four deaths or twenty-seven per cent.—the death in the second case cannot be solely attributed to the electrical treatment. It is a pity that this case and case III. have not been reported more in detail so that we would be in a better position to judge their merits. Granting, however, that these two deaths were the direct result of the treatment, the authors have met with two deaths in sixty-six cases, or about three per cent. The thirty cases treated elsewhere and seen by them in consultation have no other statistical value for we have no knowledge of the cases they numerically represent that were benefitted. The paper fairly bristles with figures which are dexterously used to prove what the authors desire—the safety of operating after a new method based on nineteen cases. But as I am anxious to show the obverse side of electro-therapeutics in fibroids, even

¹ Centb. für Gyn. 1890, p. 797.

when painted by unfriendly hands, I have given the authors' version in almost their own words.

A careful analysis of the one hundred and six cases reported by T. Keith and S. Keith¹ gives the following figures:

Completely cured—total removal of tumor	-	4	cases
Symptomatically cured	- - -	60	"
Slightly improved	- - -	21	"
No improvement	- - -	11	"
Made worse	- - -	6	"
Deaths	- - -	1	"
Withdrew from treatment after a couple of applications	- - -	3	"

T. Keith² reports later seven additional cases of small fibroids in five of which the tumor as well as the symptoms disappeared, and the other two were symptomatically cured. He states further that in some of his earlier cases when there was no improvement at first this showed itself later on and the patients were freed from their troubles.

The value of the work done by the two Keiths in this direction cannot be overestimated, for one cannot rise from a study of their report without a feeling that it was their wish to paint a true picture without any embellishments.

Dr. GEORGE GAUTIER³ reports sixty-seven cases of fibroids; of these sixty-two were symptomatically cured, four were failures, and one resulted in death from an unrecognized disease of the adnexa.

Dr. ENGELMANN,⁴ of Kreuznach, treated twenty-one cases with the following results:

Symptomatic cure in sixteen cases.

No improvement in five cases.

R. SCHAEFFER⁵ reports forty cases with twenty-one symptomatic cures, slight improvement in three and no results in five. Five were made worse, and six withdrew from treatment too soon to enable the author to form an opinion.

Bröse⁶ relates thirty-five cases. There was a symptomatic cure in twenty-one, no results in two, and in one case a pyosalpinx developed

¹ Electricity in the treatment of uterine tumors, 1889, Edinburgh.

² British Medical Journal, February 14th, 1891.

³ Centb. für Gyn, 1890, No. 19.

⁴ Edinburgh Med. Jour., Nov., 1891.

⁵ Zeitscht. für. Geb. u. Gyn. Bd XXII.

⁶ Zeitscht. für. Geb. u. Gyn. Bd XXII, p. 270-276.

in a tube already affected. This was successfully removed by coeliotomy. The cases recorded as cured were observed for two or three years afterward and no return of the symptoms has occurred.

NAGEL¹ treated twenty-four cases and obtained symptomatic cures in fourteen cases.

The results published by Dr. J. Homans,² of Boston, are usually quoted by opponents as adverse to Apostoli's method. Dr. Homans himself is inclined to look upon them in that light. But I must confess that a careful reading of the paper on two different occasions has caused me surprise that the results obtained were so good in so large a proportion of the cases, and in a few they were more brilliant than they are portrayed even by many enthusiasts. Thirty-five cases are reported, of these six cases, (Cases VI, XII, XVII, XXVIII, XXIX, XXX), had received only two applications. One case (Case XXIII) was given four negative punctures to the depth of three-and-a-quarter, three-and-a-quarter, one-and-three-quarters and two inches. Dosage of electricity ranged from seven to thirty-five milliamperes.

Another case (Case II) was given two negative punctures to the depth of one half inch, dosage from 40 to 50 ma. Four cases (Cases XX, XXI, XXIV, XXVIII) had only six applications. One case (XXXI) received only five applications. Thirteen cases therefore were not treated for a sufficient length of time. One of these cases in which punctures were made to the depth of three-and-one-quarter inches was treated in direct opposition to Apostoli's teachings, which state that the puncturing needle should not be inserted for a greater depth than two-fifths of an inch. In spite of all these circumstances sixteen patients were symptomatically cured; three were considerably improved, five were slightly improved, five were not in the least benefitted, one was made worse, and one died from septicæmia in four weeks as a result, the author thinks, of the treatment. A death from septicæmia when the application is intra-uterine, as it was in this case, ought not to occur if strict antiseptic precautions are carried out. The operators (not Dr. Homans but two assistants) frequently employed the carbon electrode, which owing to its absorptive qualities, requires the greatest care to keep clean. They should be boiled for an hour at least each time after being used. Whether this was done is not stated.

¹ Zeitscht. für Geb. u. Gyn. Bd XXII, p. 280-287.

² Boston Med. Jour., 1891, p. 246-280.

Apart from this unfortunate occurrence the results are extremely good considering that many of the tumors were very large, reaching to the umbilicus. Dr. Homans received replies from several of the patients two and three years after they had been treated. A very large proportion of these stated that they enjoyed fair health and were free from symptoms.

My own experience extends over ten cases of fibroids, in which I followed Apostoli's method closely. I used a large clay electrode on the abdomen, and within the uterus a platinum or a carbon electrode, the latter when I wished to do sectional cauterization. The galvanometer I employ is one I obtained from Gaiffe in Paris, and it has given me good satisfaction. The strength of current varied from seventy-five ma. to two hundred ma. but in the majority of instances ranged from one hundred and twenty-five to one hundred and fifty ma. The séances were usually of five minutes duration, and were repeated from two to three times a week. When it was at all feasible I availed myself of the use of a bivalve speculum, passing the uterine electrode, with the aid of the sight, and by seizing the anterior lip of the cervix with a volsellum.

This course I consider has several advantages in the matter of cleanliness and asepticism. In seven of my cases a symptomatic cure was obtained. In one the treatment seemed to hasten the extrusion of two moderately-sized submucous growths which I removed surgically without any difficulty. From this on the profuse hemorrhages ceased. But as the polypi were not detected until three months after the treatment had been discontinued, the patient not having been examined in the meantime, it is a matter of reasonable doubt whether their expulsion can be laid to the credit of the treatment. Different observers make different claims for galvanism regarding its value in this direction. Thus La Torre extolls it highly for its efficacy in hastening the extrusion of submucous growths, and reports eight cases supporting his view. Bröse, on the other hand, denies that it possesses any such virtue and considers it contra-indicated when the fibroid is of the sub-mucous variety. One of my successful cases is of special interest in that it opens up the question of the availability of electricity as a therapeutic measure in cases with organic disease of the heart of so severe a nature as to entirely exclude any surgical interference.

The patient, Mrs. E., was kindly referred to me for treatment, February 11th, 1891, by Dr. L. Conrad. She was fifty-one years of age

and had multiple fibroids filling the pelvis and reaching to within an inch of the umbilicus. Four years before she had passed through a serious attack of typhoid which left her with a damaged heart. For the past twelve months she had several attacks of angina and cardiac asthma. A physical examination revealed a double aortic and mitral murmur. The menstrual flow for some years already had been quite profuse, but for the past year or so it had increased very much in amount and in duration, lasting from twelve to fourteen days. In consequence of this she had to keep to her bed half the time and would scarcely recover from one hemorrhage when another would set in. Ergot had been given for a long time without any effect. She had considerable pressure-symptoms such as weight in the abdomen and inability to stand for any length of time. She was a very stout person and could not lie on her back without bringing on an attack of asthma. At the first application I placed her on the table in as comfortable a position as possible, with head well elevated. I had scarcely begun to turn on the current through the means of the water rheostat when I noticed that she began to cough, gasp for breath, her whole face suddenly turning to a deep purple color. I immediately turned off the current, removed the electrodes, sat her up on the table and applied such restoratives as I happened to have at hand. After a half hour's anxious time the alarming symptoms subsided and the patient felt as usual save some fatigue in consequence of the attack. As she felt convinced the attack was due to the constrained position and not to the electrical current, an opinion which I shared, I made an application of the current two days later. This time I placed the patient on my massage couch and in a semi-sitting posture. I turned on the current slowly, stopping first at fifty ma. then at seventy-five ma. and finally reaching one hundred ma. which I applied for five minutes. She endured the application well, though toward the end of it her face began to grow red and she complained of a sensation of heat mounting upward. From the end of February until May 5th she received nine more applications (dosage varying from sixty to one hundred and forty ma.) all of which she bore remarkably well. There was an improvement of all the symptoms excepting the hemorrhage.

After the fourth treatment, the menstrual flow became normal in amount and in duration a few months later and continued so when I last saw the patient last August. She was then feeling very much better in every respect and could walk and stand with ease. She died suddenly about a month ago in an attack of angina.

Here was a case in which surgical interference was entirely out of the question and in which ergot had failed to give any relief. The only treatment available therefore was galvanism, ten applications of which made her comfortable, checking the menorrhagia and relieving the pressure symptoms for the remainder of her life. From my experience in this case and from two others I have become impressed with the necessity of watching the face closely when applying currents of high intensity in patients with organic disease of the heart. When the face begins to grow red and the lips to change color then the current should, at once, be gradually turned off. If further experience confirm the safety of high-dosage galvanism in serious cardiac troubles, Apostoli's method will have an undisputed field in this class of cases. This field is a fairly large one as shown by recent researches. Hofmeier was the first to draw attention to the frequency of degeneration of the muscles of the heart as a complication of uterine fibroids. In a paper entitled "Die Operative Behandlung der Uterus Myome" in the "Archiv für Gynäkologie" Band 38, Heft I, 1890, G. Leopold states that of one hundred and forty cases coming under his observation twenty-six or over eighteen per cent. had serious cardiac complications which would render any surgical interference extremely hazardous. One of his patients on whom he did a castration died a few hours after the operation as a result of the cardiac lesion. In deciding as to what treatment to adopt in any given case Leopold makes it a point of vital importance to ascertain the condition of the heart and believes that degeneration of the heart muscles has frequently been the cause of death in many of the fatal cases that have been subjected to surgical procedures.

I have arranged in tabular form the results obtained in three hundred and seventy-two cases of fibroids collected as follows:

	No of cases.	Complete cure.	Symptomatic cure.	Much improved.	Slightly improved.	No improvement.	Made worse.	Deaths
Martin & Mackenrodt....	36	....	20	....	....	14	....	2
T. & S. Keith.....	103	4	60	....	21	11	6	1
George Gautier.....	67	....	62	....	4	....	....	1
T. Keith.....	7	5	2	....	....	....	....	....
Dr. Engelmann, Kreuznach.....	21	....	16	....	....	5	....	....
R. Schaffer.....	34	....	21	....	3	5	5	....
Bröse.....	35	....	21	....	11	2	1	....
Nagel.....	24	....	14	....	....	10	....	1
J. Romans.....	33	....	16	3	5	9	1	1
H. N. Vineberg.....	10	....	7	....	....	3	....	....
Total.....	372	9	239	3	40	63	13	5

They who have followed up the literature of the subject will know that this table is made up in part from those who are unfriendly to Apostoli's method and in part from those who must be considered as unbiassed observers. And yet it gives us sixty-four per cent. of symptomatic cures, two and a half per cent. of complete cures and only one and one-third per cent. of deaths.

In cases of dysmenorrhœa apparently due to a stenosis or some structural changes at the internal os galvanism has proved of the greatest value in my hands and in those of others. From four to six applications of a current, strength from twenty-five to thirty ma., with the negative electrode passed just beyond the internal os are usually sufficient to give complete relief. As to the permanency of this relief I have no data of my own to present nor have I been able to find any in literature. Some of my cases have been treated from three to twelve months ago and they still are free from their dysmenorrhœa.

One patient had first been subjected by Dr. Buckmaster and myself to a very thorough dilatation and curetting under ether, the uterus afterward being drained by a gauze tampon. For the next two periods she was entirely free from pain, though prior to that she had suffered so much pain as to prevent her from going about for the first two or three days. At the third menstrual flow after the operation she had a great deal of pain during the first day, and at the fourth period her pains were about as bad as they ever were. This, by the way, is the usual experience after dilatation and *curettage*.

I then made four applications of negative electricity (dosage from twenty-five to thirty ma.) passing the electrode just to the internal os twice, and beyond the internal os at the other two sances. The next menstrual flow was perfectly painless, the patient not knowing that the flow had set in until she saw the blood stains on her clothes. She had two more applications at intervals of a week before the expected next period which was free from pain—as every period, now to the number of four, has been since.

In *endometritis* not dependent upon gonorrhœa or disease of the adnexa or displacements and adhesions of the uterus, electricity takes high rank with other well-known therapeutic measures. The dosage I employ varies from thirty to fifty ma., and the uterine electrode is usually made negative.

I am well aware that at the present time, in this city, the vogue is to dilate, curette, and pack with iodoform-gauze. This, no doubt, is a valuable procedure, but, in my hands, at least, is not always attended

with the desired effect. Some of my patients have returned a few months afterward saying that the discharge had recurred and was almost as profuse as before the operation. I don't think this result was due to any fault of mine, for I always dilated very thoroughly so that I could pass a Polk's cervical speculum with ease, was careful to curette every portion of the endometrium, and had no more difficulty than most of my colleagues in introducing the iodoform-gauze. In fact latterly I have had no difficulty at all in doing this with Sim's tampon screw.

Electricity has all the advantages of this method and possesses some additional ones. It dilates the cervical canal, thus favoring drainage, and it cauterizes superficially the endometrium. But it also effects the circulation of the uterus and its surrounding tissues which a mere curettage does not. I have often had ocular demonstration of the effect electricity has on the uterine circulation. When a negative electrode is inserted into the uterine canal and a current strength of from thirty to fifty ma. is applied, the portio vaginalis will be seen to undergo distinct changes of color. At first it becomes reddish, after a short time the color deepens, and in about two minutes it loses its color and grows quite white and bloodless, remaining thus until the end of the séance. I have not seen any mention of this phenomenon in literature and would be interested to learn if others have observed it.

In *endometritis hæmorrhagica* electricity must take its place with curettage and packing. I have had some cases in which the curette failed and electricity afterward succeeded, and *vice-versâ*. This apparently paradoxical experience frequently finds its parallel in the domain of general therapeutics. We cannot, as yet, tell why arsenic will act, as if by magic, in some cases of neuralgia and miserably fail in others.

In the *Amenorrhœa* of relatively young married women in whom a premature climacteric might be suspected galvanism has been of service in my hands. Most authors employ the faradic current in this affection using a bipolar uterine electrode.

In inflammatory pelvic exudates which have passed the acute stage, galvanism applied through the vaginal vault and abdomen is a safe and exceedingly efficacious remedy.

I have never used galvano-puncture in these cases. During the Winter of 1890-1891, through the kindness of Dr. Wallach, I treated a number of cases at Mt. Sinai Dispensary. The results were almost

invariably good. The patients were always relieved of pain and could walk with greater comfort and ease. In some the exudate disappeared after a longer or shorter period, in others again the local condition would show but little change while the improvement in the symptoms was marked. This corresponds with the experience of Theilhaber,¹ Bröse and others.

In accumulations of pus in the pelvis and in pyosalpinx I agree with Burrage² that "it is bad surgery to resort to galvano-puncture" or electricity in any form. These cases demand surgical interference.

In uterine displacements with adhesions and in fixations of tubes and ovaries electricity cannot accomplish much. In these conditions I always employ pelvic massage, if they resist the routine treatment of hot douches, iodine, boroglyceride and ichthylol tampons.

The treatment of ectopic gestation by electricity has so frequently been discussed in this society that I desist from saying anything upon this topic.

I think that at the present time the following conclusions are justifiable:

(1.) Apostoli's method is a valuable palliative in uterine fibromyoma, though not entirely free from danger.

(2.) It forms a formidable rival to castration, being almost as efficacious, and not attended with anything like the same mortality.

(3.) In small myomas Apostoli's method is often attended with complete cure. Hence the importance of subjecting patients early to the treatment, before the growth has had time to reach large dimensions.

(4.) In those cases of uterine myomas complicated with serious cardiac disease, and in which any surgical procedure is attended with great risk to life, electricity forms a safe and efficacious therapeutic resource.

(5.) In certain forms of dysmenorrhœa, amenorrhœa and endometritis and in chronic inflammatory exudates electricity takes high rank with other well-known therapeutic measures.

167 East 61st Street.

¹ Münch. Med. Woch., 1892. 21 and 23.

² Boston Medical and Surgical Journal, 1892, p. 600-603.

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EDITORIAL.

INTESTINAL PARALYSIS AS A CAUSE OF DEATH AFTER ABDOMINAL SECTION.

All operators of large experience have met with fatal cases after abdominal section in which it was impossible to assign a satisfactory cause of death. There is no evidence of peritonitis in such cases and the patient seems to die from exhaustion. Until recently these cases were confidently classified under the head of shock, but within the past few years teachers and writers have so emphasized the frequency of septic peritonitis as a cause of death, and the responsibility of the operator in taking measures to avoid it, that to avow another cause at this time is to conflict with the feeling that, whatever the condition, peritonitis is the real cause. In this eager and pushing age when so many strive to lead—or, next to this, to seem to lead—a new *scent* has but to be indicated to start all in *full cry*, and, to carry further the language of the hunting-field, some are so eager that they outride the hounds. To-day it is not infrequently stated that practically there are but two causes for death after section, viz. :—septicæmia and hemorrhage. While these causes are of the greatest importance we should not overlook others.

Among the original communications in this number of the JOURNAL will be found a paper by Dr. Eugene Boise, of Grand Rapids, Mich.,

in which he reports a case of intestinal paralysis following case of coeliotomy which he treated by the administration of morphine hypodermically. The operation was done for the removal of appendages which were surrounded by dense adhesions and were removed with difficulty. Although it is not so stated we presume that the operation was prolonged, and that considerable exposure of the intestines was necessary. The patient rallied well from the operation, but there was much pain and vomiting and the abdomen was distended with gas. In accordance with the practice of the day efforts were made to produce catharsis by salines, but these proving unavailing turpentine, castor-oil and ox-gall enemata were tried. A large quantity of water was injected through the long tube. No result followed these efforts, and there was constant regurgitation from the stomach with some abdominal pain and increasing tympanites. The condition of the patient became so alarming that it was thought, after a consultation with Dr. Etheridge of Chicago, that the patient could not survive more than a few hours. A diagnosis of paralysis of the bowels was made, all active measures to produce catharsis were suspended, and the patient given a fourth of a grain of morphine hypodermically. This was followed by cessation of the pain and vomiting, and the patient rested. After the lapse of several hours the administration of an enema was followed by copious and offensive discharges of an involuntary character, and the patient recovered.

We must congratulate Dr. Boise on the result of his treatment. We have seen cases presenting symptoms like this narrated, where efforts to evacuate the bowels were persevered in until the patient expired. In the light of these cases and others reported, it would seem that the prejudice which blindly interdicts the use of opium is productive of harm, as the indiscriminating application of general rules to individual cases must always be. The result of this case not only merits congratulations, but the perspicacity, which made the differential diagnosis between this condition alone and the same condition associated with peritonitis, is worthy of praise.

In considering the cause of the paralysis Dr. Boise suggests that it may be due to over-stimulation of the sympathetic plexuses in the mesentery; the condition of tonic contraction of a portion of the intestine, as pointed out by Dr. Ashton of Philadelphia, may simulate intestinal paralysis in its symptomatology and is relieved by the same treatment. The splanchnic nerve possesses true inhibitory power over the small intestine, and the Doctor thinks it a fair inference that the

lower part of the colon and the rectum are also supplied by some of its fibres. Irritation of this nerve carried to a certain extent would produce paresis of this part of the intestinal tract, independently to a greater or less extent of the vascular conditions.

It is not a new discovery that under certain conditions opium acts as a purgative, but the question involved is whether it can be so used that the evils attending its administration may be avoided. We cannot agree with the writer who advises that "the patient be placed in bed, a full dose of some opiate (preferably codeine or suapnia) be given hypodermically" to avoid undue irritation of the nerve fibres and painful peristalsis. The evil of the routine use of opium after section has been established and such a plan as that just stated would be a step backward. We believe that the good results obtained by withholding anodynes is not sufficiently great to warrant allowing a patient to wear herself out with great pain, but we have established the fact that it is the great exception for patients to suffer great pain after section.

The important suggestion involved in the paper under discussion is that the use of opium is justifiable and desirable in so far as it may aid in the establishment of catharsis.

REVIEWS.

DE LA STÉRILITÉ CHEZ LA FEMME ET DE SON TRAITEMENT. Par le Dr. DE SINÉTY. Avec 18 figures intercalées dans le texte. Paris, 1892, pp. 215.

STERILITY IN WOMAN, AND ITS TREATMENT. By DR. DE SINÉTY.

Every gynæcologist knows well the patients who come to him for relief of barrenness, an affliction which the leading instinct of their sex impels them to look upon as akin to, if not actual, disgrace. They return again and again, persistent, demanding relief where there is no relief. It is not alone, however, in view of this class of patients that Dr. Sinéty has given us this little work. Upon the opening page the

diminution of the birth-rate of France is stated to be such as to demand the attention of economists, of physicians and of patriots:

"As to birth-rate we rank lowest among the nations of Europe. From 1861 to 1881* we count only twenty-five births to the thousand inhabitants. The most of our neighbors have thirty-seven or thirty-eight. * * * Since that period the rate is even lower. In 1890 the births were more than 30,000 less than the deaths! * * * During the last quinquennial period France has increased in population scarcely 200,000, and this is due in part to immigration."

Sterility, then, demands serious consideration, although far from being the sole cause of this startling condition of affairs. The absence or restriction of number of children in most families is, we are told, "the result of a voluntary act on the part of the parents." This, again, is "the result of the struggle for existence which becomes more and more difficult." He who studies the progress of the race by the light of evolution will note and ponder these facts. He sees it solving the problem of Malthus for itself. The only maxim propounded by this philosophical writer, after a careful study of the constant tendency of population to increase faster than the means of subsistence, was: "Do not marry till you have a fair prospect of supporting a family." The race goes on marrying and—abstaining from having children. A satisfactory solution of the problem must be relegated to a far distant future.

The rôle of the woman in generation is, like her structure, much more complex than that of man, and the failure depends upon her in the great majority of cases. Still we were not prepared for the relative proportion as given by the author. That of one to ten has generally been accepted in the past, and Gross gives eight *per cent.* as the ratio of male to female sterility. Here we find the statistics of Lier and Ascher which give 169 cases out of 424 sterile families as dependent upon the husband, or about forty *per cent.* These statistics are German; farther observations are necessary to decide whether there are *national* differences in this respect. In investigating the man's power of procreation the author emphasizes the necessity of observing the activity of the spermatozoa, as well as ascertaining their presence. His advice to the young practitioner as to his conduct when he has ascertained that the fault is on the male side of the house, is very good, containing much more of worldly wisdom, however, than science! Briefly it is: "Don't be too positive—the future may appear to prove that you were mistaken! And why be so cruel as to destroy the hap-

* The figure is missing.

piness of a family where the head of it is living in the enjoyment of a paternity which certainly could not be his?" Besides: "In many instances of this kind the woman will succeed in persuading her husband that her virtue has never tripped and that the doctor is an ignominious ramus!!!"

The corporeal causes of sterility are as diverse in woman as her anatomical structure is complex. Through these the author goes, one by one, from the hymen and vulva to the tubes and ovaries. The important part played by gonorrhœa is fully recognized and finds frequent repetition. As causing epididymitis in the male, and metritis, salpingitis, and pelvic peritonitis with consecutive adhesions in the female, it is one of the principal agents in causing barrenness. The young practitioner need not look for an acute attack on the part of the woman any more than in the man. The mischief may be effected by a husband who believes himself entirely cured, and the infection of the woman may be made within the cervix. In treating of the obstacles to conception at the os and cervix Emmet's operation is considered, yet with no more favor than it receives generally in Europe. The author says it has been abused, that it is often useless, that cases of laceration frequently recover without it. As to the influence of the operation in causing sterility or dystocia, however, he expresses himself positively; there is no cause to fear either the one or the other from it. We have not heretofore seen given the influence of sugar in preserving the vitality of the spermatozoa and promoting their activity. In cases, therefore, where it is probable that acrid discharges prevent conception, this substance should be added to the alkaline injection ordered at bedtime.

The longest and most interesting chapter in the work is the one on the general causes which more or less influence procreation in the two sexes. Chlorosis, tuberculosis, syphilis, obesity, diabetes and albumenuria, all are duly treated of, both etiologically and therapeutically. But besides these there are powerful general influences which require and receive consideration; such are the varying surrounding conditions, the state of nutrition, relationship, race and seasons. The influence of the latter is recognized even by the laity, and the poet sings of the spring-time as the season when men's "fancy lightly turns to thoughts of love." But the author seems to believe in an individual seasonal influence favorable to conception. Thus, in a family having had but one child and desiring more, he would advise intercourse, after a period of sexual rest, about the period of the year when the single conception occurred. He has seen an instance

in which four births of a family all took place in the same month and another would have occurred had the gestation not been terminated by a miscarriage. The bisulphide of carbon seems to exercise a highly deleterious influence upon the procreative faculty of both sexes among those whose calling exposes them to its influence. In the male it lessens desire and power, with females conception is rare, and when it takes place they almost always abort.

Considerable attention is devoted to the subject of artificial impregnation. Disclaiming any frequent resort to this procedure, the author considers it under certain circumstances as fully justifiable and one which may be accepted by "even the most conscientious practitioner." The details of the technique are given.

We have noted but few points for adverse criticism in this little work. The subject is considered and presented as fully and satisfactorily as might have been expected from the author of a complete treatise on Gynæcology which has passed through several editions.

J. C. R.

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- TOTUT, L., et EM. BLANC, Anatomie de l'utérus pendant la grossesse et l'accouchement. Section vertico-médiane d'un sujet congelé au 6^e mois de la gestation. Un volume in-folio, contenant, avec le texte à deux colonnes, six planches en 12 couleurs, représentant de grandeur naturelle deux coupes de femme et quatre coupes de fœtus. Paris. \$16.
- WEISS, Otto v., Zur Behandlung der Vorderscheitellagen. (16 S.) Leipzig. \$0.25.
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These books may be obtained from L. Hydel, 212 E. 50th St., New York. Delivered in New York at the prices above stated.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, Dec. 6th, 1892.

GEORGE TUCKER HARRISON, M. D., President.

A Report of the Examination of the Specimen of Resection of the Cornu of the Uterus presented by Dr. H. J. BOLDT at the last meeting of the Society, held October 18th, 1892.

The specimen consists of the ovary, Fallopian tube and a piece of the uterine wall.

From the macroscopical and microscopical examination of this specimen, I am of the opinion that what were believed to be adhesions is a portion of the broad ligament of the uterus, much thickened by inflammatory deposits. In this thickened mass is an abscess, one cm. in diameter, which encroaches on the uterine wall. This abscess has been ruptured on its upper side.

G. C. FREEBORN, Pathologist.

New York, December 1st, 1892.

Report of the Examination of the Uterus presented by Dr. J. R. GOFFE at a meeting of the Society held November 1st, 1892.

The specimen consists of the uterus with attached fibroids. It is an irregular, lobulated, rectangular shape, measuring twenty-one cms. in length, seventeen cms. in width, and thirteen cms. in its antero-posterior direction. Attached to its right side by membranous pedicles are two fibroids. The one nearest its base is kidney-shaped, measuring ten and one-half cms. in length, six and one-half cms. in width and six cms. in thickness. Its pedicle measures four cms. in length, three and one-half cms. in width, and nine mm. in thickness. The second fibroid, four cms. above the first, is ovoid in shape, measuring six by six by four cms. Its pedicle is two cms. long, two and one-half cms. wide and five mm. in thickness.

At the base of the uterus, on the left side, is an oval fibroid, which projects considerably above the surface, and measures twelve and one-half by eight cms. Posteriorly there are two fibroids projecting above

the surface. They are ovoid in shape, the largest measuring eight by seven cms., the smaller six and one-half by four and one-half cms.

The left tube and ovary are attached to the uterus; the right ovary is missing but the tube is attached.

Lateral section through the uterus, shows its interior dilated into a pear-shaped cavity, fourteen cms. long and ten cms. wide at its widest part. The neck of the pear is the uterine cavity and measures four and one-half cms. long and three cms. wide. Opening into the upper left hand side of the uterine cavity is a spherical-shaped cyst—body of the pear—filled with irregular shaped calcareous masses, the largest of which are about one C. C. in size. These masses are all dove-tailed into each other and were removed with some difficulty. The spaces between these masses were filled with purulent matter. The internal surface of this cyst is rough, with a number of the calcareous masses imbedded in it.

Extending around the line of junction, of this cyst with the uterine cavity, is quite a prominent ridge, which seems to be the remains of its internal wall. This portion of the cyst wall probably ruptured at the time of the discharge of pus, mentioned in the clinical history of the case.

The internal surface of the uterine cavity is slightly rough and has a necrotic appearance, especially as the line of junction with the cyst is approached. Imbedded in the uterine wall and the wall of the cyst are a number of small fibroids.

Microscopic Examination.

Calcareous Masses.—Prove to be degenerate chorionic villi. They consist of a dense fibrous matrix in which are the remains of large blood vessels. The surface being covered with a layer of broken down epithelium mixed with pus.

Wall of Cyst.—Is composed of smooth muscle and connective tissue elements laid down in a laminated form. Its internal surface is covered with a layer of semi-necrotic granulation tissue.

Uterine Cavity.—The mucous membrane lining this cavity shows the lesions of chronic interstitial endometritis, which assumes a necrotic condition as the line of junction with the cyst is approached.

Conclusions.

The results of the examination of this specimen seem to warrant the following conclusions :

At the time of the attempted abortion, the ovum was destroyed but not cast off.

A retrograde metamorphosis took place and the ovum became encysted. One of the results of this metamorphosis being the calcification of the chorionic villi, which were retained in the cyst.

These calcified villi, acting as a foreign body, caused an accumulation of fluid [pus?] in the cyst cavity causing its distension. The over-distension of the cyst finally caused a rupture of its wall. This took place at its thinnest part, that next the uterine cavity, and its fluid contents were discharged into that cavity.

The masses floating free in the abdominal cavity proved to be calcified fibroids which had probably sloughed off the main tumor.

G. C. FREEBORN, Pathologist.

New York, December 1st, 1892.

A Report of Five Additional Cases of Complete Suprapubic Hysterectomy for Fibroids with Specimens.

Dr. W. M. POLK presented four specimens of fibroid disease of the uterus and reported five cases additional to the seventeen already brought before the Society. All five having been operated upon since first of October last. The tumors were of large size varying from that of a uterus at the fourth month to a larger size than that at term. One was a symmetrical fibro-myoma about the size of the uterus at term. Another represented a uterus so involved by fibrous tissue (occurring in several centers) that it could not be recognized. A small part of the lower segment and the cervix being about all that remained of the true uterine tissue. In this case we had several hard fibroid masses which had grown in as many directions. The broad ligaments had practically disappeared, each being spread out upon the individual mass which had thrust itself between its folds. But the most serious development was in the case of an off-shoot which springing from the hinder face of the uterus low down had first filled the true pelvis, and then become adherent to every organ in the posterior half and bottom of the pelvis. As the upper part of the tumor or tumors was equally adherent, the condition may be described as one of universal and firm adhesions. The strength of the adhesions being greater than that of the original tissue to which they were connected. The only possible course was enucleation. The ovarian vessels were found with some difficulty and tied. The uterine artery could not be reached until all of the upper

mass had been enucleated. From this cause, aided by the oozing from the former bed of the tumors, the bleeding was unusual. Added to this was much shock incident to excavating the mass in the pelvis; all this threatened death on the table. The heart's action was sustained after the operation by means of a saline transfusion (for which suggestion we were indebted to Dr. Goffe) aided by an inclination of the body head down (thirty degrees) which was continued for twenty-four hours. The patient rallied and had an uneventful convalescence. This case was one in which the Apostoli method had been freely practised even to the electro-puncture. I presume the widespread and dense adhesions had been largely produced by the action of the electric current. The case of fibromyoma shows that raw surfaces may be the cause of intestinal obstruction. The case of obstruction was treated by reopening the vaginal wound; preceding this was the most careful washing with soap and water and 1-2000 solution of bichloride of mercury. As the wound in the vaginal roof was opened an enormously distended gut was found filling pretty much the entire pelvic floor. Sweeping the finger around this a collapsed coil was met with extending between the stumps of the ovarian vessels upon the two sides. Freeing this from the adhesions which held it down, I had the satisfaction of feeling the distended coil collapse. A long drain was now inserted and the patient replaced in bed. No anæsthetic had been needed. The patient made a good recovery.

DISCUSSION.

Dr. J. R. GOFFE said that he had the good fortune to have seen two of the cases referred to by Dr. Polk. The one in which the intestines were adherent to the raw surface of the stump of the broad ligament, presented a strong argument in favor of covering up all raw surfaces in the bottom of the pelvis. Such an accident as that described, which was met so successfully by Dr. Polk, was entirely preventable, and could be avoided by adopting his method of disposing of the stump in suprapubic hysterectomy for fibroid tumor. Dr. Polk spoke of total hysterectomy as being preferable to leaving the stump fastened in the abdominal wall, (with this he was in entire accord) but he did not refer to any other method. His method, with the modification which has been suggested by Dr. Baer of Philadelphia, of tying the vessels in the broad ligaments, instead of ligating the stump proper, gives an operation for fibroid tumors superior to total extirpation of the uterus; indeed, he considered it quite ideal.

Dr. G. M. EDEBOHLS also wished to speak about the inadvisability in operating for fibromata, either by total extirpation, or by suprapubic amputation, of leaving raw surfaces at the bottom of the pelvis. In his later cases of abdominal panhysterectomy he had closed the peritoneum from the abdominal side by a continuous running Lembert suture of catgut, leaving a clean peritoneal surface at the bottom of the pelvis, and he had then closed the abdominal incision, so that the peritoneal cavity was entirely shut off, both from the abdominal and the vaginal side.

Dr. FLORIAN KRUG favored total extirpation for fibroids, but said there is no occasion in doing this operation to leave any raw surfaces in the abdominal cavity. In a paper which he had read before the Society on a previous occasion, he had laid stress on the importance of leaving no such surface in contact with the intestines.

Dr. H. J. BOLDT said that by the method which he employed in a recent case the entire peritoneal cavity was completely shut off and no raw surface left, except from a row of catgut sutures in the bottom of the pelvis, and his patient made as good a recovery as after a simple abdominal section for ovarian cystoma.

Dr. H. T. HANKS called attention to the fact that four years ago, he had been invited along with Drs. Polk, Lee, and others to witness Dr. Stimson remove some fibroid tumors of the uterus. The operation was performed after the manner which had been described this evening, the whole uterus being removed, and the whole peritoneal cavity being completely closed.

A Case of Nephrorrhaphy followed by Urinary Fistula and Salpingo-Oophorectomy.

Dr. H. J. BOLDT presented a patient with the following history :

Mrs. H. A., æt. 34. The first time menstruation occurred it proved a disagreeable surprise to the patient who had been kept in ignorance of this function, and she was so much ashamed to find her clothing stained that she washed them herself without informing her mother and put them on again wet, and from that time on she suffered more or less constant pain in the pelvis, aggravated at the menstrual period which was irregular. She was married at nineteen. Menstruation then became regular, but her pains increased in severity, most marked in the left ovarian region and finally became constant, compelling her to be under constant medical care, but without relief. She

was never pregnant. In July of this year she was curetted under an anæsthetic, also without relief of her pain, which was in addition associated with intense dragging pain in the left lumbar region. In August she consulted Dr. Davis, who found a movable kidney, a "retro-fixed" uterus with diseased adnexa, and subsequently referred her to Dr. Boldt for operation. On examination the left kidney was found very movable, reaching downward to the pelvis; the left adnexa was matted together in a large mass, adherent to the uterus and floor of the pelvis; the right appendage but moderately affected.

The beginning of her kidney complaint dates from a severe fall which she sustained.

On September 1st, the abdomen was opened and from the mass of perimetritic adhesions a pyo-salpinx with the corresponding ovary matted together and containing an abscess was enucleated, the uterine adhesions were broken upon, and the organ "ventro-fixed." The right appendage being only in a state of catarrhal inflammation was not removed. No drainage. The lumbar incision was next made and the kidney sutured to the loin with much difficulty owing to the extreme mobility of the organ and the difficulty experienced in holding it *in situ* during the operation. Recovery was uninterrupted as far as the abdominal wound was concerned. The lumbar incision had also healed by primary intention, except at one point, where a urinary fistula became established, which, however, after a few weeks healed. The patient's health is now excellent, better than ever before in her recollection; all her previous pains, including intense and constant headaches, have disappeared.

The kidney is felt firmly anchored to the loin.

A Long-Standing Abdominal Fistula.

Dr. ANDREW F. CURRIER presented a patient with this condition.

The patient illustrated an abdominal fistula, of long standing, following abdominal section, symptomatically cured. Patient, a German woman fifty years old, had been married thirty-one years, and had five children, and no miscarriages. Was operated upon October 6, 1890, for interstitial myoma uteri with extensive inflammatory deposits. Hemorrhage had been very profuse and almost constant for a period of three months, though it had been checked during the two months immediately preceding the operation. The inflammatory collections were thought to have been associated with her last confinement, with which

there also appears to have been a pelvic abscess opening by the rectum. Pelvic and abdominal pain was constant and severe. The operation was a very difficult one on account of the adhesions; both rectum and uterus being torn. The adnexa upon the left side could not be found, and upon the right side was only a hard mass about as large as an egg which was thought to be the right tube. Universally-deep silk ligatures were passed through four different segments of the myomatous uterus in the hope of so isolating the tissues that nutrition would be effectually cut off. A drainage-tube was also used, and between the tube and the ligatures an attack of peritonitis with septicæmia supervened which nearly cost the patient her life. An attack of acute nephritis was an additional complication. An abscess in the abdominal wall was discharging when she went to her home one month after the operation. During 1891 her health was poor, the mass of exudate surrounding the uterus was extensive. An attempt was made to remove the ligatures in the uterus which were evidently a source of trouble. Only one was recovered, and this one through the sinus which opened externally, (by Dr. C. T. Adams). It was then thought after various substances had been applied ineffectually to the walls of the sinus that a favorable condition for healing might be obtained by the use of trypsin. This was accordingly applied, and while it destroyed the cicatricial tissue around the opening of the sinus it also made an opening into the bladder. This was healed by the use of a permanent catheter for a few weeks. The patient then began to improve but sufficient care was not taken in irrigating the sinus, or possibly its irregularities prevented as complete treatment as was necessary. At any rate there was an accumulation of decomposing matter, and it was only a question of time when serious inroads upon the patient's strength would be the result. March 2, 1892, an opening was made in the vagina and a perforated tube carried between the two openings. This operation was attended by considerable bleeding and followed by œdema of the left leg which led me to suspect that a vein of considerable size may have been injured. It was not long before the patient began to show very decided improvement, and thus far it has been permanent. Early in November the tube was removed, and since that time the sinus has contracted to a very small caliber. Symptomatically the patient seems to be cured, is as well as she has ever been, and is able to do the hard work of her house with comparative ease. The question which arose in my mind in connection with this case was whether abdominal sinuses may not be better treated by thorough

drainage than by other measures. The time required for cure will usually be long, but during that time the sinus can be thoroughly irrigated and disinfected, which is not easy and often impossible with long and irregular sinuses which have but one opening. It is without the danger too which attends an abdominal operation for the cure of a fistula which in some cases would involve so extensive a dissection and separation of adhesions as to be wholly impracticable.

*Double Pyosalpinx Complicated with Abscess of Right Cornu Uteri.
Curettage; Resection of Uterus. Recovery.*

Dr. G. M. EDEBOHLS presented above specimen and read the following history.

Mrs. C. D., 22 years of age, was well up to her marriage two years ago. Soon after that event urethritis developed. This was followed by leucorrhœa, severe pelvic pains and atypical uterine hemorrhages which have lasted to date. On examination, November 8th, 1892, the uterus was found normal in size and position. To either side of the uterus and meeting behind it were exquisitely sensitive tumors formed by the enlarged and inflamed appendages. The tumors on either side averaged 5-6 centimeters in diameter, and in addition almost entirely filled Douglas' sac.

Cœliotomy was performed on November 11th, preceded by a thorough curettement and irrigation of the uterus with 1-2000 sublimate solution. A double pyosalpinx, the right tube containing eight and the left tube four grammes of creamy pus, and a small cyst of the left ovary, all densely adherent to each other and to the surrounding tissues and viscera, were discovered. The appendages on either side, being irremediably diseased, were shelled out, tied off and removed without rupturing either pyosalpinx.

A small tumor, 2 by 2.5 centimeters in size, in the right cornu of the uterus, next claimed attention. From its appearance and hardness it was taken for a fibroma and an incision was made for the purpose of splitting the capsule and enucleating the tumor. Pus immediately spurted out, and it was recognized that the condition presented was a localized abscess of the uterine end of the tube developed entirely within the walls of the uterus. Fortunately the uterus had been well brought up into the incision and the peritoneal cavity securely protected by sterilized "serviettes." The lips of the abdominal wound, however, became infected, as subsequent events

proved. After dipping up the pus all around and disinfecting the abscess cavity with 1-500 sublimate solution, the question arose of how to dispose of the abscess. At first Dr. Edebohls was tempted to remove the entire uterus, but recollecting that, owing to the curettement and irrigation preceding the section, he had an *aseptic* uterine cavity to deal with, he simply resected the entire right cornu of the uterus with its contained abscess. The incision ran in perfectly healthy tissues, well away from the abscess walls, and opened broadly the uterine cavity. The uterine wound was closed by a running suture of catgut carefully applied. The raw surfaces in the pelvis and the lips of the abdominal wound were dry-cleansed, touched with sterilized "*serviettes*" wrung out of 1-1000 sublimate solution, dried, and the abdomen closed without irrigation and without drainage. With the exception of a superficial abscess of the abdominal walls, the patient made an uneventful recovery and was discharged to-day, three and half weeks after operation.

The rarity of mural abscesses of the uterus independent of the puerperal state makes it worth while to record this case. Dr. Edebohls had never seen, nor did he recollect to have read of, a case of pyosalpinx in which the intra-uterine, or interstitial, segment of the tube was the seat of an independent abscess forming a distinct tumor of the uterine walls.

A second point of interest relates to the surgical treatment of this complication. It was clearly undesirable to leave either the abscess unopened, or the pyogenic membrane left after evacuation of the pus, in the abdominal cavity. Short of total extirpation of the uterus, there seemed to be but two courses left: Either to destroy the extensive pyogenic membrane, more or less thoroughly by "*grattage*," the application of antiseptics in caustic concentration, or the actual cautery; or to exsect the entire abscess cavity as was done in the present instance. In following either of these two courses—in our case at least the abscess extending to the uterine mucous membrane—the uterine cavity would necessarily be opened. If the latter were aseptic this involved no special added risk; if it contained pathogenic bacteria, a total extirpation of the uterus, although a much severer surgical procedure, would probably be safer.

A case could scarcely be imagined to illustrate more forcibly the value of routine disinfection, by curettage and antiseptic irrigation, of the uterine cavity, as well as of the vagina, *immediately previous to* a cœliotomy for the surgical treatment of diseased appendages. This

question has been freely discussed in this Society and elsewhere during the past year or two, and the consensus of opinion seems to be that wherever cœliotomy is done for salpingitis of whatever variety, curettement of the uterus should be combined with it. The only question at issue seems to be whether the curettement should be performed at the same sitting with the cœliotomy or not, and, in either case, whether the curettement should precede or follow the major operation.

The practice of Dr. Edebohls for nearly three years past has been to precede every cœliotomy for diseased appendages by curettement and antiseptic irrigation of the uterus, *at the same sitting*, and in no instance has he had to regret this course, which he had settled upon, in preference to the other courses mentioned, by a process of reasoning by exclusion. Curettement preceding cœliotomy by several days involves the possibility, if not the probability, of re-infection of the uterine cavity; with curettement performed sometime after the cœliotomy it shares the objection of necessitating narcosis twice. Done at the same sitting, as the two operations should be, he has considered the risks from possible traumatism to the diseased appendages in curettement preceding cœliotomy as less than the risk incurred from a possible slipping of intra-abdominal ligatures when curettement immediately follows salpingo-oöphorectomy; not to speak of the difficulties of subsequent curettement in case it should have been found advisable or necessary to "ventro-fixate" the uterus.

But possibly the strongest argument that can be advanced for the course advocated, and the one which had most weight with him, was that the entire genital tract as far as it could be reached from below, uterus as well as vagina, should be in a condition of asepsis, permitting of unhesitating opening into them from the abdominal side in case such should become necessary at the cœliotomy. He had, in operating for myomata or fibromata of the uterus, whenever the possibility of successfully treating the condition by enucleation of the tumors arose in his mind, and whenever, in addition, disinfection of the uterine canal by thorough curettement and antiseptic irrigation was feasible, practiced the latter before opening the abdomen. In several cases he had thus successfully enucleated uterine tumors, opening the cavity of the uterus in so doing, and had closed the uterine wound and obliterated the bed of the tumor by the running buried catgut suture in tiers. He did not believe in supravaginal amputation of the uterus, and leaving a stump either extra-peritoneal or intra-peritoneal, in dealing with fibromata uteri, but after opening the abdomen, selected, according to the indications in

the particular case, between salpingo-oöphorectomy, myomectomy, the two combined, and total extirpation of the uterus.

Although he had found it necessary in most of his cases to perform total extirpation, yet he was always glad, for the sake of his patient, when he could convince himself that a simple myomectomy, even if it necessitated opening the *aseptic* uterine cavity, would probably suffice.

When ventro-fixation of the uterus was contemplated before opening the abdomen he invariably preceded the *cœliotomy* by a curettement, both because the conditions calling for ventro-fixation were invariably associated with more or less endometritis, and because *thorough* curettement *after* ventro-fixation of the uterus was admittedly difficult.

A third point of interest in the case involves speculation as to the result in case a drainage-tube had been used. At the operation the peritoneum escaped infection from pus, while the subcutaneous fat was thus infected, as proved by the subsequent progress of the case and the development of a large mural abscess. The tight closure of the deep parts, the peritoneum, muscle and fascia, by buried silkworm sutures secured the peritoneal cavity against subsequent infection. What would have been the result, had a drainage-tube been placed and infectious material found its way along the outside of the tube from the subcutaneous fat to the peritoneum?

Finally Dr. Edebohls had in this case obtained an experience with the buried silkworm-gut suture which enhanced the already high opinion he entertained of it and to which he had given expression in a paper on "The Prevention of Hernia after Incision of the Abdominal Walls" read at the last meeting of this Society. The large mural abscess which formed after operation necessitated reopening nearly the entire length of the superficial parts of the wound on the eighth day, freely exposing five of the buried silkworm sutures on the posterior wall of the abscess.

On the eleventh day the abscess cavity was thoroughly disinfected by sublimate solution and peroxide of hydrogen, and the skin and fat closed by secondary suture, again burying the exposed silkworm sutures. Union of the wound and permanent burial of the silkworm sutures were obtained.

DISCUSSION.

Dr. H. T. HANKS said that the practice described by Dr. Edebohls is not as extensively employed as it should be, for tedious convalescence is often due to the persistence of a chronic endometritis after the removal of the tubes and ovaries. For the past year and a half he had practised curetting in cases where the endometrium was in a bad condition before operation, and he had had no reason to regret this practice. He was not prepared to say that the packing of the uterus was necessary, but it certainly had proved entirely harmless.

Dr. KRUG remarked that he was glad that another case had been added to the list of aseptic intra-uterine operations which had been done in spite of the presence of purulent disease of the adnexa. He had reported some of his cases of this kind, and had been severely criticised at the time. But more than ever he considered it a sound surgical principle to remove the primary seat of sepsis before doing away with secondary complications—the pus-tubes and ovaries. In the hands of any one competent to do a cœliotomy, this preparatory treatment is not at all dangerous. He had not been able to settle in his own mind whether an abdominal operation should be done immediately after the curetting or some days later.

Dr. BOLDT said that at one time he was strongly opposed to this preparatory curetting, but he had changed his views somewhat on this point, and he would not now hesitate to curette the uterus and would follow it immediately by an abdominal section. The practice of waiting for several days after the curetting is a very dangerous one; he hoped to prove this statement soon by presenting some specimens bearing upon this point. In his opinion, purulent disease does not contra-indicate curetting immediately before an abdominal section, but curetting in the presence of inflammatory conditions around the uterus should not be entrusted to any one but the thoroughly skilled gynæcologist.

Dr. J. R. GOFFE said that he almost invariably curetted just prior to his operations for salpingitis. Last year he saw a case in which cœliotomy had been performed six months before, and the appendages removed on one side. When first seen by him, the appendages on the other side were diseased, and the patient had a temperature of 105.°5. Believing that the trouble had extended from the interior of the uterus to the remaining appendages and that the original disease still lurked there, a curetting was done before the cœliotomy. On opening the

abdomen, a ruptured abscess of the ovary was found and a septic peritonitis, which accounted for the rise of temperature. After irrigation, the pelvis was packed with iodoform-gauze, and the patient had an easy convalescence. He thought if a curettage had been done at the first *cœliotomy*, the second operation would probably never have been required.

Dr. J. E. JANVRIN thought the members were pretty well agreed that in all cases where there is sepsis, or any diseased condition of the uterine cavity indicating that sepsis was liable to occur, it is proper to curette immediately before doing a laparotomy; but the question to decide was whether there is sufficient disease, septic or otherwise, to demand this curetting. He did not believe in performing curettage in any case where he was about to remove the appendages for salpingitis at any time prior to the date of the operation. It should be done at same date as the laparotomy, immediately preceding the latter operation.

Dr. H. C. COE said it would be interesting to know in just what class of cases we should be content with simple curetting and packing the uterus without removing the adnexa, and in what cases we should do *cœliotomy*. In spite of the earnest advocacy of curetting the uterus in cases of pyosalpinx, he could not understand how this measure could influence the pyosalpinx.

Dr. G. C. FREEBORN said that from an anatomical standpoint merely he could not understand how such an action was possible.

Dr. MALCOLM MCLEAN said that he had now a series of cases under observation in which curetting was being done with the distinct idea of avoiding the removal of the tubes. In one or two of the cases, notwithstanding the assertion that it is an anatomical impossibility, it has been clearly proved to be a clinical possibility. Under certain circumstances, the tubes will empty themselves and will not require removal. The value of the operation is still under investigation.

Dr. EDEBOHLS reminded the Society that the curettage in his case was done chiefly with the object of having the uterine cavity in a perfectly aseptic condition in case it should be necessary to open it from the abdominal side during the *cœliotomy*. About three years ago he reported a case of fibroma of the vagina, in which the tumor was a little larger than that just presented. It grew from what was formerly a lacerated perineum, and was attached to the vaginal wall just within the introitus vaginæ. In reporting the case he said that he suspected the fibroid had come down from the uterus soon after or

during labor, and had formed an attachment to the lacerated perineum, from which it received its nourishment after separation of the uterine attachment.

A Fibroid of the Anterior Vaginal Wall.

Dr. C. CLEVELAND presented a specimen of a fibroid of the anterior vaginal wall, the first of the kind he had ever met with and rare enough, he thought, to be of some interest to the Society. Beyond the fact of its rarity there are one or two points of farther interest, the question of diagnosis and the method to be employed in the removal of the tumor. The history of the patient in brief is as follows: Forty-six years of age, married ten years, has had one child and two abortions. Her menstrual life began at fourteen, the menses recurred at regular intervals of twenty-eight days, but always attended with severe dysmenorrhœa. After the birth of her child she was relieved of all pain at three recurrences. Though she was married at the age of thirty-five, her labor, which occurred within the first year, was normal and the lying-in was uneventful. Her symptoms which have been continuous for two years, are back-ache and dragging pains, as she expresses it, in the legs, especially after her menses. There has also been profuse leucorrhœa.

Bowels have been regular. Digital examination revealed a tumor in the upper wall of the vagina in intimate relation with the cervix, but not connected with or springing from it. Its proximity to the cervix was so close that a careless or incomplete examination would not have discovered its true origin. He found he could force his finger between it and the cervix, and combined manipulation then demonstrated that it was a true fibroid of the anterior vaginal wall.

He wished to speak here of the method of operation, not that there was anything in the method itself or anything out of the ordinary course that any skilled gynæcologist would not have followed, but because it had been proposed to remove the growth by the *écraseur*. Had this been done it would not have been possible to have removed the tumor without drawing into the grasp of the *écraseur* a portion of the bladder wall, and thus have left an ugly vesico-vaginal fistula. He merely made a longitudinal incision through the vaginal covering of the tumor into the capsule and enucleated the mass with perfect ease. In the process he was aided by a little instrument which he happened to see in one of his drawers as he was collecting his instruments for the operation. It had the name "Bovine" upon the handle, and was doubtless intended for a tongue spatula. He had never expected to be under

obligation to the agent of this company for his gift, and he was generally averse to throwing away any of the articles these good people so generously bestow upon us. The removal left quite a deep cavity, and this, after satisfying himself and Dr. Beam who was assisting him, that all bleeding was stopped, he packed tightly with gauze and put the patient to bed and left the house, feeling no concern about the future happening in the case.

An hour afterward Dr. Beam who lived not far away, was sent for as the patient was bleeding freely. Dr. Beam found it necessary to put in two or three deep sutures in order to control the hemorrhage. Moving the patient from the table to the bed and possibly the vomiting, which was quite severe, dislodged the clots in the vessels.

The patient made a good recovery, of course, but it shows that none too great care can be used in being absolutely sure that all bleeding is stopped permanently.

DISCUSSION.

Dr. McLEAN said that about five years ago, he presented a case of fibroma of the vagina in which the tumor was located on the anterior vaginal wall near the meatus. It was an exact counterpart of this one reported by Dr. Cleveland except as regards location. Breisky had reported a number of these cases, but they were certainly not at all common.

Three Cancerous Uteri.

Dr. PAUL F. MUNDÉ presented three uteri which had been removed *per vaginam*.

The first specimen was removed last March. He had been exceedingly disappointed at finding a return of the disease in the cicatrix five months after the operation. The specimen shows a laceration of the anterior lip of the cervix, and this was the only part that was affected by the disease, illustrating the tendency of the tissues of the cervix to undergo carcinomatous degeneration.

The second specimen was an epithelioma of the body of the uterus. The disease was entirely confined to the uterine cavity, and the diagnosis was made by the enlargement of the organ, by the foul discharge, and by a microscopical examination of the discharge removed with the curette. The pathologist reported it to be a most malignant variety of carcinoma. There were several fibroids at the fundus which somewhat complicated the operation. It is his practice now to use catgut

suture entirely. Notwithstanding the fact that this patient's condition was so bad before operation that preparations were made for saline infusion in case it should be required, she made an uneventful recovery after the operation.

The third specimen was removed from a patient fifty-five years of age, who entered the hospital two years ago on account of uterine hemorrhage. The uterus was found to be enlarged, yet there was no special evidence of uterine disease found on curetting, except the enlargement of the organ, and there was no foul discharge, and the patient refused further treatment. One year later, she returned with an offensive discharge and was then curetted again, and a microscopical examination made at that time showed the presence of epithelioma. She would only consent to a curetting, so after this had been done and an application of nitric acid made to the endometrium, she was discharged from the hospital. About three weeks ago she again returned. The uterus then was so large that he was inclined to suspect the existence of fibroids also. He instructed the house-surgeon to introduce a tupelo-tent with the idea of procuring a gradual dilatation, so that on his return to the city, two days later, she would be ready for an intra-uterine examination and a diagnosis. After the tent had been in only five hours, she had a severe chill and a temperature of 105° , and on removing the tent, a very foul and abundant discharge poured out. The next morning the house-surgeon curetted, and then applied nitric acid to the endometrium. When the speaker again saw the patient, thirty-six hours after the introduction of the tent, she was moribund. The presumptive diagnosis was made of rupture of the uterus from pressure consequent upon retention of discharge within the uterine cavity. No post-mortem examination was permitted, but the uterus was removed through the vagina. It was found to be in a very foul condition, and attached to its fundus was a coil of large intestine. At this point the uterine wall was perforated, which might have occurred during removal, but he was inclined to believe that the rupture was really ante-mortem, and that this accounted for her acute symptoms.

1. *Carcinoma of Lacerated Cervix, apparently entirely Removed, and still Early Recurrence.*

DR. PAUL F. MUNDÉ presented specimens of three carcinomatous uteri, two of which he had removed per vaginam, the third a post-mortem specimen.

In March 1882, he was consulted by a lady, forty-one years of age, from a neighboring city for metrorrhagia. He found a lacerated

cervix, the anterior lip of which had undergone cancerous degeneration. The disease was apparently so clearly limited to the cervix and had not extended to the vagina or the para-cervical cellular tissue that he thought it the most favorable case he had seen for years for permanent cure by vaginal hysterectomy. The operation was performed and the patient made an easy recovery. Three months later she was still well; but two months after that the patient came to him in the country for renewed hemorrhage, and he found the vaginal vault broken down by a return of the disease and further operative interference useless. Dr. Mundé was compelled to admit that his confidence in the possibility of permanent cure by the removal of the whole uterus, even when the disease was apparently confined to the cervix, was decidedly shaken by this case. It reminded him of his first vaginal hysterectomy for cancer of the cervix performed in October, 1884, where the diseased tissue was apparently entirely removed and still after nine months the disease returned in the cicatrix. Dr. Mundé's object in presenting the specimen is chiefly to call attention to the occurrence of cancerous degeneration in a lacerated cervix, and the importance of preventing such a development by repairing the laceration without delay. •

2. Epithelioma of the Corporeal Endometrium, with Sub-Peritoneal Fibroids at Fundus.

On October 14th, 1892 Dr. Mundé saw a lady forty-three years of age, a nullipara, who some four months previously was seized by uterine hemorrhages of irregular character, but so profuse as to weaken her very decidedly. On examination he found the cervix and the body of the uterus considerably enlarged, the latter irregularly, so as to present the appearance of sub-peritoneal fibroids. The external os appeared healthy, but from the cervical canal poured an offensive, bloody, grumous discharge. The curette easily removed numerous broken-down shreds of tissue, which were pronounced by Dr. Heitzmann to be "epithelioma of the most malignant type." Vaginal hysterectomy was advised, but was necessarily deferred until the patient's debilitated condition could be somewhat improved. After two weeks of incessant stimulation and feeding in Dr. Mundé's private hospital, he removed the uterus and ovaries on November 1st, per vaginam. The specimen shows a perfectly healthy cervix, and a uterine cavity studded with loose epitheliomatous masses. The peritoneal surface of the organ seems healthy, and it is therefore to be hoped that the recovery will be permanent. The combination of cancer of the uterus with fibroids is by

no means as uncommon as was formerly believed. Dr. Mundé has seen several specimens of cancer of the cervix with fibroids of the body. But this is the only instance where he has observed both pathological changes in such close proximity.

Catgut only was used for sutures and ligatures in both these operations, and was perfectly satisfactory.

This latter specimen Dr. Mundé thought to be an unusually fine one and certainly uncommon. Should the disease return in this case he feared that his faith in total extirpation of the uterus for malignant disease would receive a decided shock.

3. *Epithelioma of Body of Uterus. Death from Perforation of Uterine Wall.*

Patient admitted to Mt. Sinai Hospital first in January, 1891; fifty-five years of age, menopause in forty-eighth year. Complained of bleeding and abdominal pain. Not bleeding when examined; uterus enlarged. Left hospital at her own request.

Readmitted on March 22d, 1892. Uterus larger, bleeding, loss of flesh and strength. Refused diagnostic curetting.

Readmitted September 20th, 1892, with foul discharge, loss of strength and flesh. Presumptive diagnosis is carcinoma of the body of the uterus. Curetted with sharp curette, and numerous masses of foul tissue removed, which under the microscope were clearly proved to be malignant. Nitric acid was thoroughly applied to the whole endometrium. Refused hysterectomy and was discharged.

On November 22d, 1892, readmitted. November 23d, by Dr. Mundé's orders, a tupelo-tent was inserted at 10 a. m. At 2:25 p. m. chill, temperature 105°. 8:15 p. m. mildly delirious, temperature 105°. Tent removed.

November 24th. Uterine canal thoroughly curetted with sharp curette by the house-surgeon, and a large quantity of excessively foul detritus removed. Nitric acid applied. Temperature ranges from 95° to 104°.

November 25th. Patient in collapse; died at 4:30 p. m. *Autopsy.* Vaginal hysterectomy, surreptitiously. The whole of the interior of uterus in a sloughing condition, undoubtedly of cancerous nature. Intestine adherent to fundus and also cancerous. Perforation at site of adherent intestine.

In Dr. Mundé's opinion, expressed before death, there was a perforation of the uterus following retention of discharge while the tupelo-

tent was in utero. The sudden collapse and elevation of temperature seemed to point that way. Dr. Mundé did not believe that the perforation was either made by the curette or during the autopsy. The adhesion of the intestine and its cancerous condition would have rendered hysterectomy useless.

DISCUSSION.

DR. BOLDT said that one of Dr. Mundé's cases illustrated the very great care necessary in making an actual diagnosis under narcosis before undertaking any important operation. It is generally conceded that the younger the patient the greater the liability to the recurrence of the carcinoma. The specimens also showed the importance of operating as far away from the disease as possible. He congratulated Dr. Mundé on giving up the use of silk ligatures and sutures.

Ovarian Cystoma with Twisting of the Pedicle Causing Fatal Hemorrhage into the Tumor.

Dr. H. J. BOLDT presented the following specimens:

Patient æt twenty-six—was admitted to the hospital in an almost moribund condition at 6 P. M. Saturday, with the statement from her husband that she had always been well until on the previous Monday, when while lifting a heavy weight she experienced a sudden sharp pain in the lower part of the abdomen. The pain continued and there was obstinate constipation since then. On Thursday she had occasion despite of her illness to exert herself again, when the pain increased very much in intensity. The physician called in ordered narcotics and ice-bags, a consultant subsequently added flaxseed meal poultices. Vomiting began Saturday morning and had been almost incessant.

On admittance the patient was exsanguinated, almost pulseless, vomiting and in great agony

The abdomen was tympanitic, excessively sensitive and contained a large tumor on the *right* side which under the existing circumstances could not be definitely mapped out. Vaginal examination negative, bimanual examination could not be made for the reasons already mentioned. The diagnosis was probably ovarian cystoma with twisted pedicle. Operation at once.

Owing to the condition of the patient deep narcosis could not be induced. The abdomen had to be opened from the symphysis to above the umbilicus, for the reasons which are apparent in the specimen; the profuse hemorrhage into the tumor had distended the walls to their

utmost and the blood had coagulated so that we had practically a solid tumor of the ovary. The pedicle was very long and twisted two-and-a-half times from the left to the right.

The patient despite of all precautions and stimulation did not rally, dying within an hour.

It is unnecessary to make comments upon the previous management of the case, it is only of interest that not a single symptom had existed according to statements, indicating pelvic disease; however, it is by no means uncommon to find ovarian tumors of considerable size with but very slight or no symptoms referable to these neoplasms.

A Uterus Removed for Complete Procidentia of the Uterus and Vagina.

Dr. BOLDT also presented a uterus removed that day from a patient æt. sixty-two years, for complete prolapsus and complete descensus of the vagina; and again called attention to the changes in the anatomical relations, when the operation is done in such cases. An extensive anterior and posterior colporrhaphy were done on the patient also for the descensus vaginæ.

In the second case the indications were that nothing besides such a radical procedure would give relief. One of the ovaries was the seat of osseous changes, and there was a fibroma in one tube, and in the other a small osseous mass.

Five Uteri Removed; Four for Cancer, and One for Procidentia.

Dr. BOLDT also presented four carcinomatous uteri removed by vaginal hysterectomy in patients ranging in ages from forty-seven to sixty-three years during the past three weeks—to one only he desired to call especial attention. The patient, æt. sixty-three, a multipara, had had irregular hemorrhages for some months. On examination an unusually small vagina with senile colpitis was found, the uterus was high up in the pelvis and practically immoveable—under anæsthesia a large piece of fixable neoplasm from the interior of the uterus was removed with a sharp curette which was found on anatomical examination to be adeno-carcinoma. Careful examination also revealed that the fixation of the uterus was in all probability due to simple inflammation only. The hysterectomy, owing to the delay of the anatomical examination was not done until a week later. It was exceedingly difficult occupying nearly two hours. It was done with catgut ligatures according to the method described by Dr. Boldt in his recent paper. Dr. Boldt would limit the use of clamps still more

than formerly, after his experience with this and another similarly difficult case operated upon about five or six weeks previously, complicated with myoma, all patients making such perfectly uneventful recoveries. It is interesting to note in this particular case, that the cancer had apparently its origin in the corpus and spread down to and into the upper third of the cervix.

The first one had been removed three weeks before from a woman sixty years of age, who had an unusually small vagina and a senile colpitis. The pelvic floor was unusually rigid, so that it was not until she had been profoundly anæsthetized that he was able to determine that the adhesions were entirely inflammatory and not malignant.

DISCUSSION.

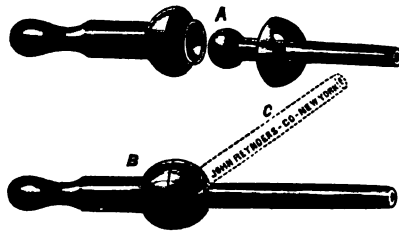
Dr. JANVRIN called attention to Dr. Boldt's statement that there was inflammatory thickening around the uterus prior to the operation, and remarked that he believed he (Dr. Janvrin) had brought up this point before the Society about a year and a half ago, when presenting several specimens of uteri which he had removed by vaginal hysterectomy. There were a certain number of cases in which the symptoms are such as to lead the surgeon to believe the thickening is inflammatory, and not carcinomatous, and in these cases an operation is justifiable. If he remembered correctly, this is the first specimen illustrating this point which had been presented since he had exhibited his own specimens. Another point to which he referred at that time was this: whether or not it was justifiable to remove a uterus when the disease had spread down from the cervix to the vaginal mucous membrane. He presented a specimen from a case where he had done this operation because the disease (as far as the vagina was concerned) involved the mucous membrane only. In the past three years he had had three such cases, and all three patients were now living and well.

A New Sound Designed to Facilitate the introduction of Gauze into the Uterus.

Dr. A. H. BUCKMASTER presented a sound which had been designed for this purpose. It was nothing more than an ordinary Peaslee's sound, which had been flattened and tapered at the end, but he had found that it overcame the difficulty usually experienced in the introduction of gauze into the uterus.

An Improvised Double Catheter for Intra-Uterine Irrigation in Emergency.

Dr. P. F. CHAMBERS presented such an instrument. He said that last summer he had been called to see a patient who had been confined a few days previously. Her temperature at the time he saw her was 104° , and her pulse 140, and there was evidently sepsis present. An intra-uterine douche was indicated, but as he had no instruments at hand, he procured a piece of drainage tubing, and a soft catheter, and by making fenestra in the sides of the drainage-tube, and then putting the catheter inside of the drainage-tube, he obtained quite a serviceable irrigating nozzle, and he had the satisfaction of seeing the woman's temperature rapidly fall after giving a douche with this instrument.



Dr. EDEBOHLS showed an *Irrigator Nozzle* which he had found among the exhibits of Stille, an instrument-maker of Stockholm, Sweden, on the occasion of the Gynæcological Congress recently held at Brussels. He regretted greatly that he had been unable to obtain the name of the inventor of the neat and ingenious contrivance, which he had used with much satisfaction. The stop-cock operated on the ball-and-socket principle; the current was shut off by deflecting the point to *C* in the cut. There were no metal parts, the entire instrument being constructed of hard rubber.

Dr. EDEBOHLS made a supplemental report upon the case of *Hematomia of the Left Ovary. Hystero-epilepsy. Removal of the Left Ovary. Cure of the Epilepsy.*

The specimens and the history of the case he had submitted to the Society on February 16, 1892, nearly ten months ago. The patient, a married woman of twenty-seven, had been afflicted with hystero-epilepsy and pain in the left groin ever since her menstrual life began at the

age of thirteen. Her family history was bad, her father having died insane. The attacks of epilepsy averaged about five per week during inter-menstrual periods. During menstruation they were very much more frequent, as well as more violent. Dr. Edebohls on examination found normal tubes and uterus, a normal sized adherent right ovary, and a hæmatoma of the left ovary, the size of a large hen's egg. This diagnosis was confirmed at cœliotomy, at which the left ovary and tube were removed; the right ovary and tube were liberated from adhesions and allowed to remain.

The justifiability of the operation was questioned at the time the specimens were presented, and he had promised, at the request of Dr. Grandin, to report again upon the case.

During convalescence from the operation the patient had one very mild hystero-epileptoid attack. Since leaving hospital, nearly nine months ago, she has had absolutely no attack of epilepsy; the hysteria had persisted although in a milder degree. The case and his promise to report upon it were called to mind by the re-appearance of the patient three weeks ago with symptoms referable to a movable right kidney. Dr. Edebohls had performed nephrorrhaphy with success on the patient eighteen days ago and she was now ready to leave hospital.

The result was especially gratifying to Dr. Edebohls, as it was the first and only case which he has ever met, in which a careful analysis of the symptoms seemed to point unmistakably to the ovaries as the origin of the epilepsy. Nor would he have operated upon the symptomatic indications alone, had he not been able to diagnosticate gross changes in the left ovary and to satisfy himself that one ovary only would probably require removal.

Persistent Pain and Menstruation after the Removal of Both Ovaries and Tubes.

Dr. H. C. COE presented a specimen with the following history: I show this specimen not because it presents any points of special interest, but because of its bearing upon a subject which has puzzled me for several years. It is highly important that we should report the cases in which we have failed to relieve symptoms by cœliotomy in order that these may serve as a guide to others. The patient (private) from whom these tubes and ovaries were removed is a young married lady, who before she came to me had been suffering for over a year from a constant backache and dysmenorrhœa. She had remained under my careful observation for a year, during which time she

received the usual palliative treatment, including both the mild galvanic and tension Faradic currents, with only temporary relief. The pain was strictly localized in a sensitive mass behind the uterus which I took to be a diseased and prolapsed left ovary. There was no improvement under treatment, and I finally decided that cœliotomy offered the only prospect of relief, in which Dr. T. A. Emmet (who kindly saw the patient at my request) agreed with me. A careful examination under ether confirmed me in the opinion that there was sufficient disease of the left ovary to justify an explorative incision, and I proceeded to operate on June 11. The operation was quite simple there being a few slight intestinal adhesions. The right ovary was the seat of fibroid induration, the left contained a cyst as large as a marble, and showed well-marked chronic oöphoritis; both tubes were healthy. Nothing else abnormal was found in the pelvis. The adnexa were entirely removed. Convalescence afebrile throughout, but the patient was not at all relieved of her local pain. She passed two months in the country and improved greatly in her general health, but saw no change in her local condition. I examined her in September and felt no induration in the pelvis, though there was the usual tenderness in the region of the stumps, so often noted for a few months after operation. Three weeks ago she came to me again, saying that the pain in her back had become unbearable and that she had menstruated regularly four times since the operation. On examination I found a mass as large as a walnut occupying exactly the site of the left ovary, in which the pain had formerly been so accurately located, quite tender on pressure and distinctly cystic. She had had no inflammatory symptoms. I frankly admitted to the patient that my disappointment was as great as her own, and waived a reply to her question regarding the necessity for a second operation. Yesterday I examined her again and found that the mass behind the uterus was larger, harder, more elongated, and exquisitely tender to the touch. It could be traced from the middle of the left sacro-uterine ligament upward and forward nearly to the left horn of the uterus.

I have ventured to trespass on your indulgence by presenting such a simple case, in order that I might, if possible, gain some light regarding the etiology, prognosis and treatment of intra-pelvic adhesions and indurations following cœliotomy. In my experience (and I have unfortunately had several cases) these often follow simple operations, with afebrile convalescence and in the absence of all evidences of mild sepsis. Are they due to some defect in technique, to the material

used for ligatures (especially *silk*), or are they accidental complications, perhaps due to mild attacks of perimetritis or parametritis occurring after complete recovery from the operation, for which the surgeon cannot be held responsible? Do these indurations, or adhesions, ever disappear spontaneously, or is there any form of local treatment (electrical, ichthyol-tampons, hot douches, pelvic massage) on which we can confidently rely to hasten their absorption? I have already written and spoken so much on this subject that it is not fitting for me to dwell longer upon it. It is one of great practical importance to all of us, for when, after a long course of palliative treatment in a non-suppurative case, we propose *cœliotomy* as offering a good prospect of relief and operate apparently under the most favorable conditions, it is exceedingly discouraging to meet with such a result as the one which I have mentioned. In hospital practice we may succeed in closing our eyes to some of the sequelæ of abdominal section, as we lose sight of the majority of our patients, but in private practice the disagreeable results of unsuccessful operations are constantly thrust upon us.

DISCUSSIONS.

Dr. H. J. BOLDT said in view of the fact that Dr. Coe used silk entirely, he would like to ask him if he had found in subsequent laparotomies any change about the pedicle. From one case of his own, and from the experience of others using silk, he knew that it was not uncommon to find on secondary laparotomies thickenings about the pedicle-stumps to be the cause of the pain in some instances. This was one of the reasons for his discarding the use of silk.

Dr. COE replied that in two or three secondary laparotomies he had found these thickenings—in one case after two years, so that he had begun to look upon silk as an irritant and as probably one of the causes of this condition.

Dr. FREEBORN recalled examining one of Dr. Coe's specimens, in which it was suspected some ovarian tissue remained in the stump, and in that case a silk ligature was found entirely embedded in a deposit of new tissue.

Dr. H. M. SIMS said that during the past year he had had two cases of most persistent pain occurring several years after laparotomy. He had done a secondary laparotomy on one case last spring, which had been operated upon for double pyosalpinx seven years before. The pain had appeared two years after the first laparotomy, and had continued ever since. The patient had been away for a long time, but on

her return he found a thickening near the right pedicle, and the secondary laparotomy showed very abundant adhesions to the intestines and a serous effusion had taken place inside of the plastic exudation, making a mass resembling a fluid tumor. He broke up the adhesions, punctured the sac, and evacuated the fluid. Since this operation she had no more pain. He could not state the exact cause of the trouble, for he had been unable to find a vestige of a silk suture.

Dr. CURRIER said that the patient whom he had just presented, had a somewhat similar history, but in her case a number of large ligatures were found. In another case which had given him considerable trouble during the past two years, a great many silk ligatures had been used, some of them quite coarse. Here, again, the persistent pain was rather suggestive of the ligatures being the cause. It does not follow, however, that silk ligatures are the cause of this pain in every case.

Cases of Hæmato-salpinx and Hæmatoma Resembling Ectopic Gestation.

A paper with this title was read by Dr. E. B. CRAGIN. (See page 112).

DISCUSSION.

Dr. J. WHITRIDGE WILLIAMS, of the Johns Hopkins Hospital, Baltimore, being invited to open the discussion, said that he did not think that the conclusions of the author were justified from the cases reported, although he quite agreed with him that all cases of hæmato-salpinx are not due to extra-uterine pregnancy. He had examined a considerable number of such cases and had found that nearly all of them were due to this condition, and in all but one of them was he able to demonstrate chorionic villi. In some cases, however, they are very difficult to demonstrate and it is necessary to cut several hundred sections before finding them; so that a negative result after the examination of a few sections does not necessarily mean that one does not have to deal with an extra-uterine pregnancy.

Cases of hæmato-salpinx may be divided into two classes:—in one, the tube is filled with a more or less thin bloody fluid; while in the other it contains a hard clot, which closely resembles placental tissue. There is a marked difference between these two classes. The first class may be due to hemorrhage of any kind into the tube; he recalled one case of purulent salpingitis, due to the staphylococcus aureus, in which the congestion was so great that the tubes were filled with blood; but no one would think of attributing such cases to an extra-uterine pregnancy. On the other hand, when the tube is filled with a solid red

clot, the chances are very much in favor of extra-uterine pregnancy, and a careful microscopic examination will decide the question.

If he might be permitted to make a few remarks about extra-uterine pregnancy in general, he would say, as the result of his experience, that there are no constant anatomical changes in tubal pregnancy. In one class of cases, he had found the tube perfectly intact on either side of the foetal sac, which was perhaps situated in the middle of the tube; in another class, as exemplified by a case in which the woman died immediately after operation, and the autopsy held one hour later, a series of sections from the middle of the fundus uteri to the foetal sac showed the tube to be perfectly normal up to a certain point, then its lumen became more and more narrow, until finally it was obliterated just before reaching the sac. In a third class, he had found the lumen of the tube, instead of becoming obliterated, spreading out and presenting a sieve-like structure before reaching the sac.

In a paper, which he had published in the *American Journal of Medical Sciences*, on the anatomy of the tubes, he had pointed out the existence of diverticula extending from the lumen of the tube into its wall, and stated that in some instances they might play an important part in the etiology of tubal pregnancy, for if a fertilized ovum were driven by the action of the cilia into one of these diverticula, it would be impossible for it to escape and it would there go on to further development. Since then he had seen two cases, in which the ovum had passed into a diverticulum and developed, and these constituted a fourth class. In neither case was a foetus found, but in both the lumen of the tube was perfectly normal, the placenta being situated in the tube wall, entirely outside of its lumen, from which it was separated by the normal ciliated epithelium of the tube, and in places by a considerable amount of muscular tissue. He could not say how often these diverticula occurred, but having found these two cases within the past year, it could not be considered a very rare condition.

He could not agree with Mr. Tait, who states that the ciliated epithelium is always destroyed before the occurrence of the pregnancy; for in every case which he had examined, the cilia were in no way affected. The ciliated epithelium is far more resistant than is generally supposed, for even in marked cases of pyosalpinx, in which one would naturally expect their destruction, they are frequently preserved; accordingly it does not appear probable that they would be destroyed in catarrhal salpingitis, as he states.

The discovery of diverticula from the lumen of the tube and the

development of the placenta within them, certainly offers a satisfactory explanation for a limited number of cases of ectopic gestation; and a consideration of the different conditions prevailing in such cases, as has just been mentioned, clearly indicates that the question of the etiology and anatomy of tubal pregnancy cannot be settled by a few broad, sweeping assertions.

Dr. G. C. FREEBORN said that in the cases coming under his observation there has almost always been a well-formed foetus present, and in the few cases which were doubtful, examination of a great many sections had always resulted in the discovery of the chorionic villi.

Dr. BOLDT, speaking from both a clinical and a pathological standpoint, said that in his experience, and that of several others, when the blood that is found in the Fallopian tube is fluid, it indicates a true hæmato-salpinx, but when there is solid clot in the tube, it indicates an ectopic gestation.

Dr. KRUG had operated upon a great many cases which had been diagnosticated as extra-uterine pregnancy, and which presented every symptom of that condition. Still the foetus had not been found at the time of operation, but there was usually an enlarged and partly ruptured tube, containing a blood clot. The effused blood around the tube had usually been shut off from the general peritonéal cavity by plastic exudation, forming a so-called hæmatocele. In some of these cases, the foetal structures had been found subsequently. Recently a gentleman who had been present at one of these operations, asked him how he knew it was a case of ectopic gestation. He replied by asking his interrogator in what percentage of his cases of miscarriage had he seen the foetus. The gentleman could not state the percentage, but admitted that these cases were quite numerous. Dr. Krug felt that he was just as much entitled to call his cases ectopic gestation, as the other gentleman was to call his cases miscarriages. We do not always find tubercular bacilli in the sputum of tubercular patients, yet this does not prevent us from making a diagnosis of tuberculosis; we must take into account the clinical history. One of the cases reported in the paper is a very rare congenital anomaly; in all the other cases although there was no positive proof of extra-uterine pregnancy, there was every probability. At the next meeting he would produce three specimens of hæmato-salpinx upon which he had recently operated; in only one had the foetus been found, yet he would challenge any one to say from the appearance of the specimens in which one the foetus had been found.

Dr. CRAGIN, in closing the discussion, said that Dr. Williams had said that the conclusions in his paper were hardly justified, and yet he had drawn a similar conclusion himself, for he said that most of the cases of hæmato-salpinx and hæmatoma were due to ectopic gestation, and yet admitted there might be a few instances which were not due to this cause. This was just the point which the author had desired to bring up. There are a few cases which cannot be proven to be ectopic gestation and hence they should not be so regarded or reported until such proof can be furnished. In most cases of miscarriage, although the foetus may escape detection, scrapings from the uterus will show the chorionic villi. The absence of tubercular bacilli from the sputum of tubercular patients is not a parallel case, because although they may be absent in some well marked cases of tuberculosis, there is other proof of the existence of this disease.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, Dec. 20th, 1892.

WILLIAM T. LUSK, M.D., in the Chair.

Extirpation of the Fibromatous Uterus.

Dr. W. R. PRYOR, reported such a case with the following history:

The operation has now become so general an exception in New York since the paper by Dr. King, that I must apologize for showing a specimen removed by this simple procedure.

The patient, single, aged 35, was perfectly healthy up to seven years ago. She then began to have intermenstrual bloody discharges which lasted two years and ceased without treatment. About two years ago she was subjected to Sims' operation of exsection of the cervix for cystic degeneration, and a year later underwent another operation for piles. She came to me for backache and profuse menstruation, her September period lasting eleven days. November 22d, I curetted and otherwise prepared her for the radical operation. November 25th the uterus and

tumors were removed. Five ligatures were used; three of these with the stumps they included were turned into the vagina, and the rent in the pelvic floor closed over them. The sole point of interest in this case was the occurrence of intestinal paralysis. So uniformly has this supervened after the removal of the entire fibroid organ, that I am forced to look upon it as an attendant from that operation. It is not peculiar to total extirpation but will also be found to follow super-vaginal hysterectomy. This patient was most carefully prepared for a week before the *cœliotomy*, by a careful attention to the diet and the administration of strychnia. Yet her bowels refused to move until a light injection of an ounce of salts were given; and she vomited bile and other contents of the small intestines for three days. At no time was she tympanitic. So perfect has our method now-a-days become, that every factor in technique and management tells for or against the patient. I bring to your attention this subject of the effect of the removal of an organ so intimately associated with the sympathetic nervous system merely to produce discussion. At no time did the patient receive a particle of any opium preparation or chloral.

DISCUSSION.

Dr. LUSK said that three days ago he had performed Hegar's operation for fibroids of moderate size, and had noticed an excessive tympanites immediately following the operation; he thought this was similar to the case just reported.

Dr. POLK said that in his opinion, Dr. Pryor made a mistake in keeping his patient on milk diet before the operation. Personally, he had had much less trouble since he adopted the plan of treating these patients on the same principles which governed him in cases of operation upon the cervix and perineum. He allows his patients the ordinary diet up to the night before operation; and then they are given three compound cathartic pills, and in the morning a breakfast of milk, tea or coffee. He prefers to move the bowels as soon after operation as possible—usually about thirty-six hours after the operation, giving them ten grains of gray powder, and four hours after this, following it with a saline, which acts much more promptly when preceded in this way by a mercurial. The case just reported by him is the twenty-third complete hysterectomy which he had done, yet there had been no instance of intestinal paralysis except where there was evidently intestinal obstruction, and he had only had two cases of the latter.

Dr. PRYOR referred to two interesting cases which he had seen in

which the diagnosis had been made of intestinal obstruction. In one, on performing abdominal section, nothing was found but tympanites and an exudation of lymph over the intestines, and the autopsy showed no cause for the peritonitis. In the other case, a man had suffered from constipation for days, and had taken much morphine for the relief of pain. In this case also no obstruction was found; only tympanites; yet if these cases had occurred after laparotomy they would have been put down unquestionably as instances of intestinal obstruction.

A New and Convenient Metal Box for Carrying Sterilized or Iodoform-Gauze.

Dr. TULL presented for Dr. H. T. Hanks this instrument with the following description:

Every surgeon or obstetrician will find it convenient, if not necessary, to carry iodoform or sterilized gauze. A box like the one represented will contain a five-inch gauze roller, and has the merits of being exceedingly convenient and thorough by protecting the gauze from sepsis. Fig. C represents the box with the end of the gauze roller protruding; but the gauze can not be removed until the slots in A and B come in apposition. This apposition of the slots can be easily regulated as there is a slight groove at fig. 3 on the rim of A and B, which serves as an indicator.

The construction is simplicity itself. A is the box. B is the cover, which slides down over the box A to the roughened rim. The roller gauze can be slipped upon the rod 1, or can be rolled upon tube 2, which rides upon rod 1, as may be most convenient. When the slot in the box A, and the slot in the cover B are in apposition, as shown by the indicator in the rim, it is an easy matter to pull out the end of the aseptic roller as needed. Then when a sufficient quantity has been used one turn of the cover to the right or the left, completely closes the box and fastens the gauze.

Case of Death from Hemorrhage Following the use of Clamps in Removal of the Uterus for Cancer.

Dr. Lusk reported the following case:

The patient, Mrs. K, called upon me first, May 15, 1891. She was then forty-five years of age, and was the mother of two children, the younger of whom was aged sixteen. She suffered from excessive anæmia due partly to influenza, but mainly to menorrhagia. She had an extensive cervical laceration, which I closed after I had curetted the

uterus. For a time the improvement was considerable, and until lately the patient enjoyed average good health. Then the hemorrhage returned and for several weeks was nearly continuous.

On the third of November of the present year, in conjunction with her physician, Dr. W. Brewster Clark, I again resorted to the curette and packed the uterus subsequently with iodoform-gauze. The scrapings proved to be adenoma maligna. The menorrhagia continued. I recommended extirpation of the entire uterus. The disease was confined to the uterine cavity, and the organ was of moderate size and freely movable.

The operation was undertaken on the eleventh of November. I began by dividing the vaginal attachment of the cervix both front and rear. I then stripped up the vagina posteriorly, opened into the cul-de-sac of Douglas, and stitched the peritoneum to the cut vaginal surface. After partial separation of the cervix from the bladder in front, I ligated the uterine arteries upon the two sides, and divided the broad ligaments with scissors as far as the ligation extended. This permitted the descent of the cervix to the vulva. The separation of the bladder up to the anterior cul-de-sac, the opening of the peritoneal cavity in front and the attachment of the peritoneum to the vaginal cut surface, were accomplished without much difficulty. It had been my intention to ligate the broad ligaments in sections, but at this point Dr. Stewart who was giving the ether, and whose coolness is always to be trusted, remarked that the patient's pulse was not as good as it had been. This led me to resort to the Dolirus clamps to shorten the operation.

I had used them repeatedly before, and always with satisfaction. On this occasion their application was particularly easy. With the finger hooked over the broad ligament the latter was drawn down so that both instruments were adjusted under the guidance of the eye. The uterus was separated by scissors and drawn out by forceps. In the latter movement a slight impulse was communicated to the clamps. When the uterus was withdrawn the ovarian arteries on both sides spirted. The bleeding was arrested by ligatures. The actual amount of blood lost was not excessive, but the patient's pulse became very weak, and she died on the table within an hour.

I came here this evening to place the case upon record as a warning to others.

DISCUSSION.

Dr. CURRIER said that the effect of hemorrhage upon different individuals was relative to individual tolerance. Dr. Lusk would probably recall a case seen with him only a few days ago, in which the loss of blood was probably very much greater than in his case, yet the patient's pulse had not risen above one hundred after the operation. A hemorrhage which would scarcely affect one individual would, in a patient like the one upon which Dr. Lusk had operated, probably terminate fatally. The unfortunate termination in this case certainly did not reflect upon the skill of the operator.

If obliged to use clamps, the rule would seem to be that the more we can get the broad ligament into sight, the more satisfactory would be the result; but the clamp is not absolutely safe under any circumstances, and the speaker's habit was to use a sufficient number of ligatures carefully applied. Another objection to the clamp was that it might grasp more tissue than was intended. He had assisted recently in a case in which, although clamps were applied, the hemorrhage continued. Abdominal section was performed and fortunately, for it was found that a portion of the small intestine had been included in the bite of the clamp. Except in extreme cases, he would advise the ligature, for its application could be determined by sight and there would be the minimum of danger of subsequent bleeding from shrinkage of the tissue.

Dr. E. B. CRAGIN did not approve of the particular clamp employed by Dr. Lusk, for the blades were so long as to give too large a bite, and it also increases the danger of sloughing. Personally, he was not in favor of the clamps at all; out of nine hysterectomies he had had only one fatal case and that was one in which the clamps were used, and at the end of forty-eight hours, the time when it was usually considered safe to remove the clamps, on removing them the vessels began to bleed, and the woman died of hemorrhage.

Dr. A. PALMER DUDLEY said that it was very commendable in Dr. Lusk to report this death upon the table. Reports of one's failures often bring out many points which have not been discussed to any great extent. The accident in this case he thought was largely due to the clamps. The only advantage in their use is the saving of time, and personally he preferred the ligature. At best, vaginal hysterectomy is a difficult operation to do, unless one is very expert and the uterus can be drawn well down so that the vessels can be properly secured.

He had come to the conclusion that it is easier, just as quick, and much more thorough to make abdominal section, beginning from above and ligating the vessels. Martin's method of suturing before cutting is of course a good one but consumes much time. In a recent case he had started in to do a vaginal hysterectomy, but finding he could not remove the uterus in that way, he had performed abdominal section and had removed a large hydrosalpinx. He tied off what appeared to be an adhesion of the omentum. After the operation the patient suddenly developed symptoms of shock which were thought at the time to be due to hemorrhage. The patient died. At the post-mortem examination another large hydrosalpinx was found up under the omentum holding six ounces of fluid and he found that he had simply tied off the pedicle of the hydrosalpinx. To have succeeded in such a case with vaginal hysterectomy would have been almost impossible.

Dr. JOSEPH BRETTAUER asked if the masses removed by curetting had been examined, and whether the patient had had profuse menstruation.

Dr. LUSK replied that the masses were not examined, but they seemed to be ordinary polypoid growths. The patient had profuse menstruation at the time of the first curetting, and, later on, menorrhagia.

Dr. BRETTAUER said that if he had the misfortune to have a case where troublesome narcosis necessitated haste, he thought he would rather postpone the completion of the operation than use the clamps. He had seen one case in which this had been done; the patient rallied well, and after thirty-six hours the operation was completed and the uterus very easily removed.

Dr. POLK said that about one year ago, Drs. Coe and Krug had discussed this subject, although not from the standpoint of Dr. Lusk. It has generally been supposed that the use of the clamps is a pretty secure way of controlling the vessels. Several years ago, Dr. Lusk saw a case with him in which the clamps were used, and after the operation one of the clamps split, owing to a defective joint, and a fatal hemorrhage came on two hours afterwards. Of course in this case the defect in the instrument should have been foreseen; but it illustrates one of the dangers. He thought the members were pretty well agreed that the clamp was a very dangerous instrument, and that when it is used there is difficulty with drainage, the action of the bowels, etc.; the general opinion seems to be that the ligature is much preferable to the clamp.

His personal preference was decidedly in favor of the abandonment of the clamp.

Dr. LUSK, in closing the discussion, said that quite recently he had read reports of discussions on this subject in which excellent results had been claimed. He had been largely influenced by these reports, and by his own previous experience with the clamps, in resorting to this method in the present case. Since this unfortunate occurrence, in conversation with medical friends, he had learned of three or four analogous cases when the clamps had been used.

A Plea for a Just Estimate of the Value of Electric-Therapeutics in Gynecology.

A paper on this subject was read by Dr. H. N. Vineberg. (See page 124.)

DISCUSSION.

Dr. PRYOR thought the fact that the author's statistics showed three per cent. cured and one per cent. mortality should be enough to absolutely condemn this treatment.

Dr. A. H. BUCKMASTER said that, irrespective of treatment, sudden death in cases of fibroid was not infrequent. Several cases of this kind had come under his observation, and yet the autopsy showed no sufficient cause for death. This fact should be considered in studying statistics of mortality.

Dr. A. H. GOELET agreed in the main with the conclusions of the reader of the paper. The unfavorable statistics referred to by Dr. Pryor are doubtless due to the fact that this is a comparatively new method of treatment, and it has been applied to cases not at all appropriate to its use, all of which have been included in the statistics. We are just beginning to find out in what cases it can be employed to the best advantage. For instance, it is now believed that submucous fibroids should not be treated by electricity if they can be safely removed. Again the subserous fibroids are not so amenable to treatment by electricity unless they can be reached for galvanic-puncture. The remaining class—interstitial fibroids—are those most amenable to this treatment. In his own experience in the treatment of fibroids, embracing fifty or more cases in which the treatment could be carried out for any considerable length of time, he had not had any unfavorable results; he had never failed to relieve the symptoms and no patient had been obliged to submit subsequently to an operation. Reduction in the size

of the tissue was in some cases very little, and in some none at all, but in others the reduction was considerable. Those where no reduction was noticeable were in women who had passed the menopause in whom the fibroids are very hard. They may perhaps have undergone calcareous degeneration. In his experience in almost all fibroids of recent origin, where proper treatment could be carried out, the result was satisfactory, both as regards the relief of the symptoms, and diminution in the size of the growth.

As an illustration of the importance of early treatment, the speaker cited the case of a colored woman in whom, to his certain knowledge, the tumor had not existed over two years; five applications sufficed to reduce the tumor one-third.

There has been some prejudice against the treatment owing to the fact that failure has occurred in attempts to control hemorrhage, due to the fact that these attempts have been made while active bleeding was going on. At this time electricity will not always prove successful in immediately controlling the hemorrhage, for it is impossible to coagulate the blood inside the uterus or cauterize the endometrium during active hemorrhage, because the flow of blood along the electrode prevents the proper action of the current. At this time the tampon or curette should be employed, and in the intervals the current should be used.

The tortuous condition of the canal often prevents the introduction of the electrode to the full depth, and this is a point very often overlooked. Another obstacle is the projection of an interstitial fibroid into the cavity of the uterus, thus preventing the electrode from being brought in contact with the whole interior of the uterine cavity.

He agreed with the author that when dysmenorrhœa is due to stenosis of the canal electricity will give relief. It is certainly also a very satisfactory method of treatment in endometritis, but in some cases he prefers first to dilate, curette, and drain, and subsequently employ electricity if further treatment is found necessary.

The reader of the paper had alluded to the condition of anæmia produced about the cervix by the application of the current. This has been referred to before and has often been noticed on the external surface of the body where the current has been used for the removal of hairs and birth-marks or moles.

Recent inflammatory deposits in uncomplicated cases are amenable to treatment by galvanism, provided a proper choice is made in the selection of the poles. On the whole, he had found that the galvanic treatment of fibroids was satisfactory, except in effecting much reduc-

tion in their size, and he thought at the present time no one claims that electricity would completely dissipate these tumors.

Dr. A. D. ROCKWELL said that, while not a gynæcologist, he was interested in all forms of electrical treatment. He considered it very significant that while it is so very easy to dissipate and cure by electricity conditions which are out of sight, it is so difficult to cure kindred conditions on the surface of the body. Our medical journals are full of accounts of cures of urethral stricture by electricity in the hands of the general practitioner; from these accounts it seems only necessary to introduce an electrode into the urethra, yet, strange to say, one cannot affect cicatricial contraction outside of the body by a galvanic current of similar strength. He did not think any one had ever seen a fibroid tumor dissipated by electricity—certainly not on the outside of the body—except suppuration be produced. Of course, as Dr. Goelet had said, a very slight diminution might be produced. He did not wish to be understood as considering electricity of no use in gynæcology; on the contrary, he thought it a valuable agent, but in his opinion it is a mistake to permit it to supersede other methods of treatment. The statements made abroad by many observers concerning its efficacy in uterine therapeutics are greatly exaggerated. The paper read to-night was conservative and in the right vein.

Dr. A. PALMER DUDLEY said he was very glad that the paper had been presented, because it gave some of the more enthusiastic ones an opportunity to make a confession that electricity had not proved in their hands to be a panacea. Not long ago one of those who had already spoken claimed that almost all uterine diseases could be cured by electricity; to-night he tells us that it is wrong to use it when the women are flowing; submucous fibroids are not proper cases for electricity; it is hardly so handy as other measures in cases of the subperitoneal variety; and finally, that the mural fibroid is the only one that electricity will benefit. He also tells us that he is not quite certain about its action in dysmenorrhœa. Personally, the speaker said, he believed electricity occupied an important place in uterine therapeutics. He had used it, following closely the directions of his friend who had spoken, yet he had not obtained any such brilliant results. It must not be forgotten that there are some dangers in its use—it not infrequently causes peritonitis. Last summer he removed a fibroid from a woman who had been thoroughly treated by a physician who was making electricity a special study. There was a distinct history of peritonitis after nearly every séance, and on opening the abdomen he

found everything was glued together by adhesions. This fall he had seen another case in which, after electricity had been used for a time, it seemed to stimulate the growth—a mural fibroid. An abdominal section was performed and the tumor enucleated from the uterus. The tubes and ovaries were not removed, and since then she had been perfectly well. For these reasons he occupied a middle ground and, although he was willing to use it and glad to use it in proper cases, he did not believe we should subject patients suffering from multiple fibroid to a long course of electrical treatment, because he did not believe that it would ultimately effect a cure. Indeed, the statistics presented in the paper support this view.

Dr. E. H. GRANDIN said this was probably the only society in this country in which the subject of electricity could be introduced without giving rise to acrimonious discussion. Judging from the discussion so far, we are gradually arriving at the position which he had occupied for years, viz.—that electricity is not a “cure-all” but simply a valuable adjuvant to our other methods of treating the female pelvic organs. Personally, he was exactly where he was five or six years ago when he read a brief paper on this subject before the Society. It depends largely upon the desire of the woman whether he would advise abdominal section or electricity in cases of fibroid tumors. He knew he could check the hemorrhage, at least temporarily, due to fibroids in the average case by the use of electricity. If the patient suffered only from the hemorrhage and is satisfied with this symptomatic cure, even though it be a temporary one, he would be satisfied to give her electrical treatment; but if she complains of pressure symptoms which render her an invalid, he would not advise electricity, for in his experience it does not cause these tumors to diminish in size. In the average case of fibroid, he could better and more quickly control the hemorrhage by the curette than by electricity. The hemorrhage is generally dependent upon a fungous endometritis; therefore if you remove the fungosities, hemorrhage will cease until the fungosities return. It is evident, therefore, that there is a very small field for electricity in fibroid tumors.

Where there is dysmenorrhœa associated with stenosis of the cervix electricity is of value, because it is one of the means at our disposal for curing the endometritis that is the primary cause of the dysmenorrhœa. If a simple endometritis, he could cure it with negative galvanism; if, however, it be of a higher grade, he much preferred to anæsthetize the patient, dilate the cervix thoroughly, curette and

drain the uterus, and carry out the after-treatment properly. He had never seen displacements of the uterus benefitted in any way whatever by electricity. It is positively wrong to treat pus-tubes, ovarian abscesses, and localized pelvic collections of pus by electricity; the safety of the woman calls for surgery, and the average man who understands the value of asepsis ought to be able to get good results from abdominal section in such cases.

In his hands, the chief sphere of electricity is to relieve pain. In the neuralgias of the pelvic organs it is of great value, if properly used, i.e., by the bi-polar tension faradic current. He rarely failed to relieve such neuralgias in this way. At present he does not often use galvanism in his office, but he very frequently employs bi-polar faradism. He had now made a frank confession regarding his own personal views on electricity in gynecology, and if any one were curious to know how much he had retracted, by referring to his writings it would be seen that he still holds the same views expressed several years ago, viz.;—that as an addition to other measures it is valuable, but alone, except for the relief of pain, it is of very little utility.

Dr. CURRIER said that it sometimes happened that anything which enabled us to gain time was advisable, and he thought there was no question that electricity was of value in such cases. He thought two factors had tended to bring electrical treatment into disrepute—one was that pelvic disease had been looked at too exclusively through surgical eyes, and the other that electrical treatment was often attempted by those who had insufficient knowledge of it, or insufficient faith to give it a fair trial. He felt satisfied that in a majority of cases electricity would relieve two conditions, namely, hemorrhage and pain. He did not believe in the use of galvano-puncture, and he thought peritonitis might be avoided if this procedure and very strong currents were avoided. In the treatment of hemorrhage, he had found the intra-uterine use of the positive pole effective, and the fact that it produced a cauterizing effect readily explained this. It was useful in most cases for the relief of pain, and it was not scientific, wise, nor desirable to throw aside an agent that was upheld in so many cases.

Dr. E. L'H. MCGINNIS had been impressed with the conservative tone of the paper and was pleased with the confessions which it had elicited. Personally, he had been a little more fortunate than some who had spoken, and that too in a rather large experience, for in his position as electro-therapist to the Woman's Hospital in New York, and to the gynecological department of the Vanderbilt Clinic as

well as in private practice, he had made something over twenty-one hundred applications of electricity since October 1st, 1891. The great majority of this large number had benefitted the patients, and he had not yet seen a single case which had been made worse by the treatment. No operation is justifiable which is more dangerous than the trouble which calls for it, and taking the statistics of deaths from fibroids and those following operations on such cases, the showing is not favorable to the operative plan of treatment. There are certain conditions, however, in which electricity would be even worse than useless, e. g., any tendency to either cystic degeneration or sloughing. The action of electricity on fibroids is still *sub judice*, and Apostoli is now striving hard by new methods to get better results from the current. Last summer, the speaker saw him giving it with the sinusoidal current, but as yet the cases are too few to draw conclusions. He had had very fortunate results from the negative intra-uterine galvanization in the treatment of dysmenorrhœa due to stenosis. It is well known that a current of only thirty to fifty milliampères will dilate a constriction which would otherwise prevent the introduction of the electrode for the treatment of a fibroid, and accordingly it is his custom in such cases to apply the *negative* electrode first in the uterus, to facilitate its introduction to the fundus. Usually after a negative application of this kind has been made for not over one minute, the electrode slips in almost of its own accord. He had had no trouble in checking hemorrhage due to fibroids in every case in which electricity had been applied during the hemorrhage, provided the canal would admit an electrode. He had often succeeded in checking it where ergot, tampons and other measures had not been successful. Most of those who have used electricity agree as to its usefulness in cases of endometritis. In young married women with amenorrhœa, he had obtained excellent results from negative galvanic intra-uterine applications. He did not agree with the author that electricity was of no use where the uterus was thick and inflamed. In Dr. Pryor's severe criticism of the author's statistics, he probably had not taken into consideration the fact that over two hundred cases had been *symptomatically* cured.

Dr. GOELET regretted that his remarks had been misunderstood. He did not say that hemorrhage could not be controlled by electricity, but that some failures were due to attempts made while active hemorrhage is going on. He was not yet prepared to retract any of his previous statements, but on the contrary would reiterate all the claims he had made for this agent.

Dr. VINEBERG, in closing the discussion, said he felt that he had succeeding in presenting an impartial paper, for he had been attacked by both sides. Electrical treatment has passed the ordeal of unqualified condemnation and the equally dangerous one of blind enthusiasm, and it ought to be the mission of the future workers in this field to furnish us with unvarnished data showing what electricity can and cannot accomplish. If one's relative should present herself with a fibroid (unless the indications were very strong and pressing) we would scarcely feel like subjecting her to an operation which in the most successful hands, according to the most recent statistics, gives a mortality of from twenty to twenty-five per cent. He had offered no theory as to the causation of dysmenorrhœa, but had said it was considered to be due to stenosis, or structural changes, at the internal os. He knew that when there is no appreciable disease outside of the uterus, these cases are relieved by electricity.

TRANSACTIONS OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

Second Annual Meeting, held in New York, October 4th, 5th and 6th, 1892.

First Day, October 4th, Morning Session.

THE Association was called to order by the President, who then delivered his address on "Electricity, and Medical Art and Science." Seldom, he said, had a branch of science requiring so much intelligence been so sedulously relegated to the incompetent, with exceptions the more brilliant by their isolation. Among the reasons for the present backward position of electro-therapeutics and the difficulties of comprehending the nature of electricity, traditional adherence to drugs in the treatment of disease, skepticism as to the value of other therapeutic measures, a natural contempt for the ignorant methods pursued by charlatans who were among the first to make much use of this agent in medicine, and the ignorance of the public who regard electricity as a great "cure all." At present, the electrical engineers are beginning to invade the realm of biology, and, what is more important, medical men

are turning their attention to the physics of electricity. We build our faith upon the known and remarkable action of this agent upon living tissues, viz.: the excitation of living protoplasm; electrolysis, without which there would be no conduction; cataphoresis, by which the fluids of the human body are moved by the flow of the current from the positive to the negative pole; and the vaso-motor effects. Electrolysis, chemically, and cataphoresis, mechanically, alter the amount and distribution of the salts necessary to the proper nutrition and function of the various parts of the living organism. Electrical action in the human body to a great extent becomes a chemical process, and as it is there confronted with the ordinary chemical processes of the living organism, it may be said that much of electro-therapeutics is chemistry against or in conjunction with chemistry.

The next in order was the report of the committee on standard coils. This committee had been unable, as yet, to formulate a report, but the members, Drs. Morton, Goelet, Hutchinson and Massey, expressed their individual opinions on this subject.

Dr. GOELET, of New York, had found the manufacturers, with the exception of the Chloride of Silver Dry Cell Company and the Galvano-Faradic Company, rather reluctant, on account of the great expense incurred, to construct the long fine wire coils which he desired, but he had experimented personally enough to note that the suggestions made in his paper, read at the last meeting, were in the right direction.

Dr. HUTCHINSON thought the committee should report progress, and be continued for another year. It was very desirable to have a definite coil, of a definite resistance; then there would be some means of comparing the results obtained by various observers.

Dr. MASSEY had devoted his attention chiefly to a consideration of the powers of the primary faradic current to contract muscle, and, in doing so, he noted great differences in this respect in the four Du Bois-Raymond coils in his possession; differences which he attributed to variations in length of the primary wire, in the length and mass of the core, and in the character of the current interruptions.

Dr. MORTON said that in view of the fact that induction coils, may be made varying in the number of interruptions from 20 per second to 20,000 per second, and that, so far as known, the latter had no effect on the human system, some idea might be obtained of the difficulties encountered by the committee. He suggested that an electrical expert be added to the committee, and mentioned the name of Mr. A. E. Kennelly. By a unanimous vote, this gentleman was accordingly added to this committee.

The Use and Abuse of Electricity in Medicine.

A paper on the above subject was read by Dr. A. D. Rockwell, of New York. The author referred to a newspaper report of a fatal case of opium-poisoning, in which four physicians attempted unsuccessfully to use an antiquated electrical apparatus which they had resurrected from a neighboring drug store, and commented upon the fact that physicians were too apt to be poorly provided with the needful electrical apparatus in a state of good repair. As in such cases, artificial respiration may be kept up for hours at a time, it was not at all improbable that this patient's life might have been saved had the proper appliances been at hand. As an example of the necessity for special training for the practice of electro-therapeutics, as for all other special departments in medicine, he contrasted the treatment of two cases of infantile paralysis. In one, there was but little muscular contractility remaining when the case first came for treatment. He subjected the muscles to prolonged and powerful faradization, with the result of entirely extinguishing the little muscular irritability which had been present. The second case was treated patiently and skilfully with the continuous current, with the result of gradually but markedly increasing the power of the muscles. As an instance of the recuperative effect of electricity when intelligently applied, the author then exhibited a patient who, as a result of a railroad accident, had sustained some injury of the radial, median and ulnar nerves. For three months before coming to this physician, the faradic current had been applied at a series of long sittings. When first seen, in May last, there was such profound atrophy and loss of muscular irritability, associated with degenerative reactions, that an unfavorable prognosis was given. At present, however, he is so much improved that he is able to attend to his duties as a mover of baggage. In such a case energy is undoubtedly stored up somewhat as chemical action is stored up in storage-batteries. Very few physicians understand the widely different effects to be obtained from the static, galvanic and faradic forms of electricity, and a still smaller number is aware of the great difference existing in the faradic coils themselves. Electricity is a many-sided weapon, and on account of its seemingly paradoxical claims, it often excites prejudice. The electrical engineer must be an "expert," but the physician who uses electricity may know little or nothing about it.

Dr. R. J. NUNN, of Savannah, said that the allusion to the case of opium-

poisoning made him rise in defence of the country practitioners, who are the bone and sinew of the profession. It is absolutely impossible for those working in sparsely-settled districts to have at hand all these appliances, and it is not so much their fault as it is their surroundings. Nothing had been said about the intolerance of some patients to electricity. He had sent to the President a patient in whom the current of electricity, so feeble that he could not feel it, was sufficient to set up an albuminuria. This occurred with the galvanic, faradic or static current; it could also be produced by any nervous excitement, such as a long walk, business cares, or by indigestion.

The President said that, on the whole, this so-called, "intolerance" of this patient was rather complimentary to electricity, for we are all on the lookout for objective signs or the effect of electricity on the human body. In this case, within three or four hours after the treatment, there would be a marked albuminuria.

New Contributions of the Electrical Treatment, both Faradic and Galvanic, to the Diagnosis in Gynæcology.

Dr. GEORGE APOSTOLI sent a communication on this subject, which was read by Dr. Hutchinson. The author said that his observations with the faradic and galvanic current had led him to look upon them as useful aids in diagnosis, and he thought exploratory laparotomies and mutilating operations for ovarian disease should be proscribed until we had learned all that was possible from such intra-uterine applications of electricity. In 1883 he had shown the marvellous sedative action of the current from a fine wire faradic coil, and further experience had taught him that every hysterical pain of ovarian origin is amenable to this current, and that therefor, if this current fails to give relief, there is a concomitant affection of the appendages. While employing the galvanic current in the treatment of fibroids, peri-uterine inflammations, dysmenorrhœa, menorrhagia, etc., he had been struck by the variable tolerance in the same uterus at different times.

(Continued in next number.)

ANNOUNCEMENT.

With this issue appears a transposition of the Editors' names upon the cover of the JOURNAL. The position of the names—first or second—will indicate hereafter who is Executive Editor for the time being, as these names will be transposed at regular and equal intervals.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS

MARCH, 1893.

A CASE OF MODERN CÆSARIAN SECTION WITH A
UNIQUE INDICATION; ALSO REPORT OF
A PORRO OPERATION.¹

BY C. A. VON RAMDOHR, M. D.

Professor of Obstetrics, New York Post-Graduate Medical School.

M. S. B., æt. twenty-five years, married, housewife, primipara, went to the end of term without any disturbance which necessitated summoning medical aid. About two months before labor set in, she noticed a slight bloody discharge from the vagina. She had no other symptom which prevented her from doing her housework.

On August 30, 1892, about two A. M., she commenced to feel labor pains. A midwife was called in who supported her back, made her sit over a pail of hot water, and otherwise made herself agreeable. As there was no advance in the labor and the pains were extreme, she sent for Dr. A. about five P. M. This gentleman found the patient suffering from violent pains, but was very much surprised not to be able to find the cervix or *os uteri*. He therefore sent for Dr. B. who also looked in vain for the os and who came to the conclusion that it had been agglutinated during pregnancy; in fact, he considered it a case of atresia. Having incised the cervix in other cases, he found no difficulty in drawing down that part of the mucous membrane where he suspected that the os might be and made an incision through it about three-quarters of an inch long. The incision bled very little but

¹ Read before The New York Obstetrical Society, Jan. 3, 1893.

did not put the vagina in communication with the bag-of-waters. The pains in the meantime persisted, and as no result was obtained I was summoned to see the case about ten P. M.

I found a well-nourished, healthy-looking woman in excruciating agony. The pains were almost continuous; pulse, 120; temperature, 101°; respirations, 30. An external inspection showed that the uterine ovoid was horizontal, indicating a transverse presentation; a corstic-

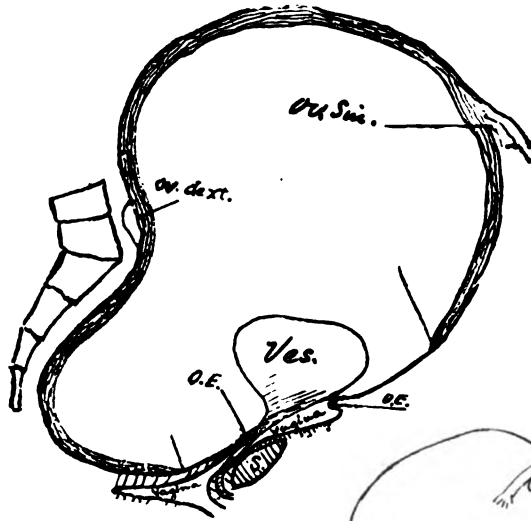


FIG. I. RETROVERSION OF THE UTERUS AT TERM AND AXIS TORSION FROM LEFT TO RIGHT. THE TWO UNLETTERED LINES REFER TO THE RING OF BANDL.

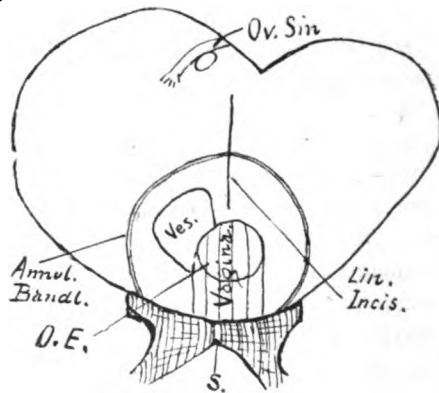


FIG. III. FRONT VIEW.

tion dividing it into two unequal halves, from above downward, showed where the neck of the child was situated. The head was in the smaller and left side. Palpation was difficult and confirmed this view. It also showed a curious ring, about seven inches in diameter, in the median line with its centre somewhat below the umbilicus, which at

first gave the impression of an abdominal hernia. Fœtal heart sounds could not be distinguished. The bladder was emptied and contained about 3ii of what seemed to be normal urine. The catheter showed this viscus to be rather high up and to the right. The rectum was empty. A digital examination revealed the following conditions: An apparently rather short vagina with a wound about half an inch long on what seemed to be the anterior aspect at about the place where the os would naturally be situated. Through this wound the finger passed into cellular tissue but was still far removed from what appeared to be a tense bag-of-waters which almost completely filled out the small pelvis. No cervix or os was apparent. On sweeping my finger about in front, I at last succeeded in finding an outlet to the small vaginal cul-de-sac. By using considerable force and by depressing my arm I managed to introduce my index finger behind the symphysis and about an inch above the bone, when I discovered the edge of the dilated *os uteri* with the membranes not ruptured and an elbow presenting.

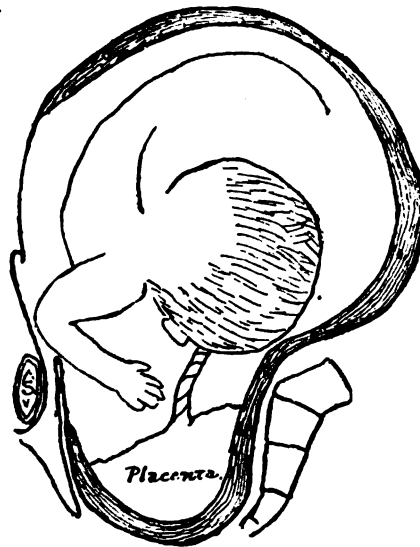


FIG. II. RETROVERSION OF THE UTERUS AT TERM. SHOULDER PRESENTATION
L. C. I. RIGHT.

Here then was a case of *retroversio uteri* at full term. Now the meaning of the ring on the abdomen to which we have alluded was apparent. It was the contraction-ring of Bandl, three-fourths of the circle being well defined on the abdomen, the lower arch dipping be-

hind the symphysis. Though it was not a case of contracted pelvis, it was impossible to make that part of the uterus which had been wedged under the promontory leave its place. Reposition was impossible and the indication for a speedy delivery was apparent. External version, or in fact any version, would not have improved matters, quite apart from the fact that such an operation was impossible on account of the spasms. As the tip of the finger could hardly be brought to the edge of the cervix, it was just possible to touch the presenting part and an absolute impossibility to grasp any part for extracting purposes. There was a bare possibility of getting a hook into the elbow and afterwards removing the child piecemeal, with a chance that the uterus might right itself after being partially emptied, but the bruising and injury to the mother's parts would have been extreme before this could have been accomplished. It was therefore resolved to perform Cæsarian section as the least harmful and most feasible operation.

With the kind assistance of Dr. Morvay-Rottenberg, Dr. Hellenstein, Dr. Pollack, Dr. Gazzam, Dr. Neumann and Dr. Guttmann, the room was soon changed into a fairly good-looking operating room and the other necessary preparations made. The patient was chloroformed and once more the bladder was located on the right side of the median line. An incision was made through the abdominal walls, commencing about three inches above the symphysis and extending upward to what seemed to be the *fundus uteri*. The uterus could not even now be liberated though the membranes had been ruptured, and thus the organ had to remain *in situ* when the incision was made through its tissues. A piece of rubber-tubing was thrown prophylactically around the uterus ready to be constricted, should a serious hemorrhage demand it, when the sacculated part in the pelvis was lifted. However, no hemorrhage occurred when the incision was made. The reason for this lies probably to a great extent in the fact, that from necessity a great part of the incision lay in the lower segment. A dead child weighing seven and a half pounds was extracted, and I now looked for the placenta. This was situated in that sacculated compartment of the uterus which was lying in the pelvis. On removing it, the uterus could for the first time be placed in its physiological position. This was done not only by raising the fundus, but the whole organ (which had been turned on its long axis from left to right) had to be untwisted. The left tube and ovary were seen no more in front near the median line but where they belong. A strip of iodoform-gauze was drawn from the cavity of the uterus through the cervix,

for the purpose of drainage, and the uterus sewn up with deep interrupted silk and sero-serous running catgut sutures. The abdomen was likewise united. Time of operation, forty-two minutes from first incision to the last suture.

Two hours after the operation the pulse was 120, temperature 101° , respiration 42. This condition practically remained the same until thirty-six hours afterward, when her temperature steadily rose, and she died on the fourth day with the symptoms of peritonitis. A *post-*

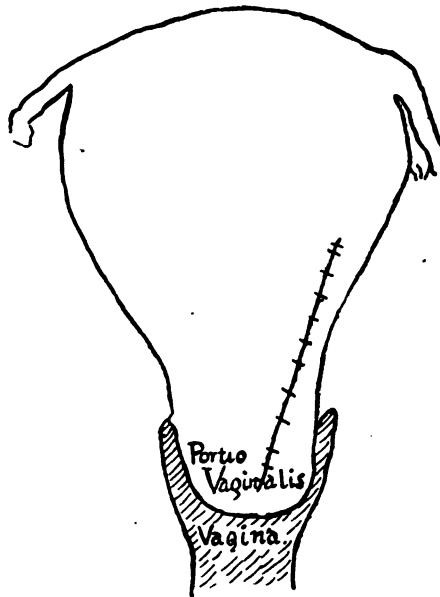


FIG. IV. FRONT VIEW. *Post Mortem.*

mortem examination was refused. Still, by a digital *post-mortem* examination, I could feel the stitches, some low in the cervix and some in the body; all on the left side, corresponding to the left edge of the uterus which had formerly been anterior. The wound seemed to be firmly united.

Once more I made sure that *no* abnormality of the pelvis was apparent.

I have not been able to find a single case on record where a retroversion of the uterus with axis-torsion at full term has been observed; nor have I been able to find a parallel case where Cæsarian section

was indicated and performed during the eighth month of pregnancy. The nearest approach to it is the well-known case, faithfully reported by my friend Dr. Boldt, where hysterectomy was performed under a misapprehension. Another interesting and unique feature was the appreciation of the contraction-ring of Bandl, almost in its entirety, through the abdominal walls. Again, the case shows what an amount of stretching the bladder and ureters will stand during pregnancy without untoward symptoms.

Whether death could have been prevented if the operation had been performed earlier; whether the patient had been infected by the midwife, by Dr. A., in consequence of the vaginal incision of Dr. B., or by myself, cannot be satisfactorily settled.

My second case, a Porro operation, I have briefly reported before in the German medical reunion, at Dr. Jacobi's house, about four years ago, but as it has never been published *in extenso* and deserves to be placed on record I crave your indulgence for placing its history before you.

Mrs. B., vii-para, once pregnant with twins, was attacked at full term by a sharp pain in the abdomen while sitting on a chair. She sent for a physician who found no rise of temperature and a pulse of 140; in short, symptoms of collapse. A hypodermic injection of morphia quieted the pain, and the Doctor promised to call the next morning. She had of course been placed into bed. An external examination of the extremely stout and sensitive patient gave negative results. *Per vaginam* the os was found closed and the foetal head could be felt above the inlet. Pulse and temperature remained the same. No labor pains. The evening visit found her in the same condition. The next morning another gentleman met Dr. A. in consultation and found the os about as big as a silver quarter; the membranes not ruptured. Vertex in the same position. Palpation was impossible on account of seeming peritonitis. Otherwise no change. Treatment, morphia and caffeine. The next morning the os was the size of a silver dollar, the head could not be felt any more, and the membranes had not yet ruptured. Absolutely no labor pains but very sensitive abdomen.

On the afternoon of the third day I saw the patient for the first time. There was no temperature, the pulse was above 140; no labor pains; abdomen tense and very sensitive. Rupture of the uterus being now suspected, a thorough examination was made after the patient had been anæsthetized with the English mixture and all preparations com-

pleted for a laparotomy. The hand easily entered the empty uterus and a couple of fingers were pushed through the ruptured site, discovering the foetus enveloped in its membranes in the abdominal cavity. As the uterus had contracted and the wound was permeable only for three fingers, Cæsarian section seemed to be a more feasible operation than extraction through the rent and natural passages. The abdominal incision extended from the navel to within an inch of the symphysis. The membranes were brittle and broke on touching them and child, membranes, and placenta were quickly extracted. The abdominal cavity was flushed with hot water and a few blood-clots came away. No fresh hemorrhage was observed. The rupture was in the fundus near the right cornu, directed from before backwards and about two inches long. A Péan écraseur was thrown around the organ, near the internal os, and left *in situ* after the uterus had been ablated. The stump was sewn in the lower angle of the wound and dressed with iodoform. The "toilet" of the peritoneum and the suturing of the abdominal wall finished the operation. It took an hour and a half to perform the operation on account of lack of light, of room, and of assistance. The surroundings were of the worst character. The patient rallied well from the anæsthetic and the operation, the pulse went down to a hundred, and her condition seemed to be better than before. But after a few hours the pulse became accelerated, the temperature began to rise, and she died from shock next morning at ten o'clock, fifteen hours after the operation. A *post-mortem* examination was refused but the peritoneum of the stump seemed to be agglutinated already to the peritoneum.

The specimen which had undergone normal fatty degeneration showed part of a myoma of the size of a walnut. Half of this growth had been left in the stump. The site of rupture was much thinner (about half as thick) as the rest of the uterine wall. This myoma probably prevented the cervix from becoming effaced properly and the os from being dilated. At the onset of uterine contractions, which were scarcely noticed by the woman, the place of least resistance gave way and the rupture grew larger and larger, until all the contents of the uterus were squeezed into the abdominal cavity. Why this place was weaker than other portions the pathologist, who examined and afterwards lost my specimen, was unable to decide. As the place was so near one cornu there is a possibility that the pregnancy was originally of the tubo-uterine variety and that the ovum in time, developing in the direction of the uterus, had left a weak spot at the site of the subsequent rupture

Nowadays, it has been decided that the Porro operation is absolutely indicated under such circumstances. Still the statistics are extremely bad, as many as ninety per cent. dying. The interest centers in the point whether a diagnosis could have been made earlier or not. When the patient first complained and collapse was apparent, the symptoms showed that some grave abdominal accident had happened. In a hospital, an exploratory incision might have been risked; in a dirty tenement house it is questionable whether such heroic measures are in place. The diagnosis was easy sixty-five hours after the initial pain when the head could not be felt any more. How much sooner it could have been made I am not willing to decide. Another and almost unique point is the occurrence of rupture without a violent cause, and the extremely long time (over two days) it took for the ovum to be squeezed through the rent.

105 Seventh Street, New York.

DEMONSTRATION OF THE CYSTIC LESIONS OF THE OVARY AND FALLOPIAN TUBES.*

BY GEORGE C. FREEBORN, M. D.

It is my purpose this evening to demonstrate the cystic lesions of the Fallopian tube and ovary by a series of specimens that have been referred to me for examination as pathologist to The Woman's Hospital in New York, and while I occupied a similar position to The New York Cancer Hospital. A few of the specimens have been received from other sources. A special note of these will be made in presenting the individual specimen.

Before proceeding with the demonstration I would ask your attention to a brief description of the method of preparation. All of the specimens were received in a fresh state, a few hours after removal. In cases where the cyst was received in a distended condition, its contents were withdrawn by a canula introduced through its walls. Most of the specimens were received in a collapsed state.

* Read before the New York Obstetrical Society, January 17th, 1893.

The cyst wall is carefully examined for tears or incisions. Any that are found are sewed up tight with a fine needle and silk, using the "dead-house stitch." A large-sized metal canula is then introduced through the cyst wall into its cavity and firmly tied in. The canula is then connected with the neck of a large glass funnel supported in a ring-stand by a rubber tube. The funnel is filled with the hardening fluid—it is always to be kept filled to the top—which is allowed to flow into the cyst from a height of eighteen inches, the cyst being suspended in a vessel of the preservative. When the cyst has become distended a spring-clip is placed on the rubber tube and the specimen immersed in the preservative.

The fluid used is known as *Flemming's Chromic and Acetic Acid Mixture*. Its composition is as follows:

One-per-cent. Solution of Chromic Acid	-	-	20 parts.
One-per-cent. Solution of Acetic Acid	-	-	10 "
Water	-	-	70 "

The sections are allowed to soak in this mixture for forty-eight hours; if it is a large one and has thick walls the fluid is renewed at the end of twelve hours. The mixture acts like a tanning-fluid, making the walls firm and tough. After the specimen has been in the hardening fluid for the required length of time the spring-clip is removed from the rubber tube and the contained fluid allowed to run out of the cyst cavity. The cyst is then redistended with water and soaked in water, frequently renewed, until it ceases to be tinged yellow. It is finally preserved in eighty-per-cent. alcohol. Specimens hardened in this fluid have a dark green color which may be lightened by soaking the specimen in a mixture of equal parts of a fifteen-volume solution of hydrogen peroxide and water before placing in the alcohol.

Cysts of the Fallopian Tube.

The first series of specimens that I present illustrate a class of cysts quite common, but of little pathological significance. They are a pedunculated cyst of small size, and are commonly known as the *Hydatid of Morgagni*. They arise from the surface of the tube or from the fimbriæ by a slender stalk which varies in length in different specimens. Their wall is composed of smooth muscle and they are lined with a modified mucous membrane covered with cylindrical epithelial cells. The pedicle is also composed chiefly of smooth muscle.

As examples of this lesion I present five specimens. Three show a short pedicle, two a long one.

The next variety of cysts of the tube are those formed by the dilatation of its lumen by retained fluids. Taking the character of the fluid as a basis, these cysts can be divided into *Hydrosalpinx*, the fluid being of a serous nature; *Pyosalpinx*, when the fluid is pus; and *Hæmatosalpinx* where blood is the retained fluid.

In my demonstration this evening I shall not include specimens of pyosalpinx or hæmatoma. Specimens of the former I reserve for the future when I hope to have the honor of demonstrating to you the suppurative lesions of the ovary and tube. Of the latter lesion, unfortunately, I have no specimen. Those that have come into my hands have been used up in the microscopical examination in trying to determine if they were examples of tubal pregnancy.

As illustrations of hydrosalpinx I present twelve specimens. This series shows the various stages of the lesion from the commencement through the smaller cysts up to those of large size.

Parovarian Cysts.

These are of two varieties, pedunculated cysts arising from the tubes of Kolbert and those arising from the vertical tubes. The first variety are often taken for the hydatid of Morgagni. Their wall is composed of connective tissue lined with cuboidal epithelium, and they are filled with a clear serous fluid. The second variety, from their tendency to burrow between the folds of the broad ligament, are commonly called cysts of the broad ligament. Their wall is composed of connective tissue lined with cylindrical epithelium, which may be ciliated. In the moderate-sized cysts this becomes stratified, and in the largest it entirely disappears.

As examples of these cysts I present two specimens. One a cyst of small size still contained within the layers of the mesosalpinx, and one of large size with thin walls.

Cysts of the Ovary.

In presenting specimens illustrating ovarian cysts I shall group them into two classes: I. Small Cysts. II. Large Cysts.

In the class of small cysts I shall demonstrate: *a.* Follicular Cysts; *b.* Cysts of the Corpus Luteum. In the class of large cysts I shall demonstrate: *a.* Unilocular Cysts; *b.* Multilocular Cysts; *c.* Papillary Cysts; *d.* Dermoid Cysts; *e.* Mixed Cysts.

a. Follicular Cysts are cysts of small size, ranging from one millimeter in diameter to several centimeters. They may be multiple or single. They are usually limited to the cortical zone, but in some cases they may extend throughout the entire ovary. They may grow to considerable size and by fusion convert the ovary into a small multilocular cyst. They are formed by the accumulation of fluid in the Graafian follicle, causing dilatation, a flattening of the follicular epithelium and the destruction of the ovum. They are almost always associated with chronic ovaritis.

As a demonstration of this lesion I present nineteen specimens, which illustrate the various phases.

b. Cysts of the Corpus Luteum.—These cysts are caused by a softening of the central portion of a hyperplastic corpus luteum; they are of small size. It is my intention to present the results of my investigations on this class of cysts to the Society during the present winter.

As illustrating this lesion I present three specimens, all of which show small-sized cysts.

Large Ovarian Cysts.

a. Unilocular Cysts.—This term is used in its clinical significance, as careful examination of the cyst wall will as a rule show secondary cysts or remains of septa of secondary cysts once forming a multilocular one. For the purpose of demonstration I have grouped this class of cysts into two sub-groups: *Small Cysts*, of which I present five specimens, and *Large Cysts*, of which I present four specimens.

b. Multilocular Cysts are examples of Cyst-Adenoma. Their starting point is a new formation of glandular tissue, some of the alveoli of which become dilated by a semi-fluid material. This dilatation may be confined to a few alveoli which, becoming largely dilated, form cysts with but few chambers or secondary cysts. The walls of these secondary cysts may be partially absorbed, leaving the interior filled with a ragged mass of incomplete septa. An intra-cystic growth may develop from the wall of the primary cyst or from one of the secondary cysts. This growth may undergo a cystic degeneration. It may become so large as to fill up the cavity of the main cyst, or one or more of the secondary ones, giving them the appearance of solid or semi-solid growths. The walls of these cysts are formed of fibrous tissue lined with cylindrical epithelium which as the fluid accumulates becomes flattened, and finally in the large cysts atrophies and disappears. The

character of the fluid filling these cysts varies in different cases, and even in the various secondary cysts of the same case. It may be serous, gelatinous or mucoid in character. It may be transparent or colored red, yellow, reddish-brown or chocolate.

Taking the above brief description as a basis I have divided the specimens illustrating this lesion into three groups: *a*. Cysts composed of a series of large-sized secondary cysts; *b*. Cysts composed of one or more cysts with intra-cystic growths projecting from the cyst walls; *c*. Cysts composed of a series of large cysts, some of the secondary cysts being filled or partially filled with growths showing cystic degeneration.

Of class *a*. I present three specimens, of class *b*. six specimens, of class *c*. five specimens.

c. Papillary Cysts.—After a long controversy the histogenesis of this class of cyst seems to be settled. They were formerly regarded as a variety of cyst-adenoma in which there was an outgrowth of a cauliflower-like mass from the interior of the cyst wall. At present there is sufficient anatomical ground for placing them in a class by themselves, viz.: a papillary form of adenoma. They are generally of moderate size, filled with a clear fluid, and have as a rule thin walls. The papillary formation often breaks through the wall, appearing on the surface of the cyst, and detached masses may form secondary growths on the surface of the peritoneal cavity. These secondary growths may in turn become cystic. The papillary masses are covered with a layer of cylindrical epithelium which at times is ciliated; the same kind of epithelium lines the cavity of the cyst. These cysts may develop from either the germinal or follicular epithelium; also, according to Williams, from the tubal epithelium.

I present four specimens of this class of cyst. The first specimen, for which I am indebted to Dr. G. M. Tuttle, shows a moderately large, thin-walled cyst, the interior of which is studded with papillary ingrowths. Springing from the surface of the cyst and the remains of the ovary is a many-lobed mass of papilloma. The second specimen has already been presented to this Society by Dr. Cleveland. Its general structure is similar to the previous one, the cyst not being quite so large. The third specimen is a large multilocular cyst, the interior of which is well studded with papillary growths. The fourth specimen was presented to this Society at a December meeting by Dr. Polk and referred to me for examination. One ovary is reduced to a small, multilocular cyst with papillary ingrowths arising from the cyst wall

and septa. The papillary mass has broken through the wall on its upper surface and projects as a lobulated mass. The ovary of the other side is converted into a large multilocular cyst, from one side of whose inner wall an oval-shaped papillary mass projects.

d. Dermoid Cysts.—This form of cysts is generally of small size and may be either of unilocular or multilocular variety. Their walls are composed of fibrous tissue lined with a modified skin in which there are usually numerous sebaceous glands. The contents are of a sebaceous nature, in addition to which cartilage, bone, teeth, muscle and nerve fibres are found free or attached to the walls. Pseudomammæ and matter resembling central nervous tissue have also been found. The first specimen is one received from Dr. F. H. Markoe. It is spheroidal in shape, and contains hair and sebaceous matter. Attached to one side of the cyst wall is an oval-shaped mass composed of cartilage and bone. The second and third specimens are cysts lined with skin and contain hairs. The fourth specimen is an example of calcified dermoid. It contains hair, bone and teeth.

e. Mixed Cysts.—The last specimen of the series is an example of this class of cysts. Both ovaries are cystic and are a combination of multilocular and dermoid. The large specimen shows several small dermoids situated among the secondary cysts. The smaller specimen shows the same formation.

SHOULD MIDWIVES BE REGISTERED?¹

BY JAMES L. KORTRIGHT, M.D.

Brooklyn, N. Y.

This article is written with the purpose and desire to provoke discussion upon the question of the supervision of midwives by the State. What is the present legal status of the midwife? Is she a necessity or a nuisance? What relation does she bear to the governments of civilized communities? Has she a standing in any of the States of the Union? Is it wise for our own State to take any legislative action? If so, what should be done?

The State of New York recognizes four classes of medical practi-

¹Read before The Medical Society of the State of New York, February 7, 1893.

tioners, physicians, pharmacists, dentists and veterinarians. All of these are compelled to furnish proof of good moral character and to give evidence of knowledge of their respective branches before competent examining boards before they are allowed to practise their professions. The law prescribes how much knowledge each student shall possess before beginning study, and the duration and scope of the course of education. It also prevents any from practising except those licensed. Midwifery is a branch of medicine but differs from all other branches in that the vast majority of its patients are in a physiological and not a pathological condition. The law may exact just and heavy penalties from a man who allows his child to die of disease through neglect to call a physician. And it might punish a man who allows his wife to die of puerperal convulsions or hemorrhage unattended. Yet it would be impossible to convict a woman of the crime of giving birth to a child without medical aid. She might, and frequently does, prefer to have her mother with her instead of a physician. Or labor might be short and a kind neighbor might perform the needful offices. Neighborly attendance in cases of sudden death from other causes is considered no attendance and the facts are certified to by the Coroner. But no inquest can surely be necessary in uncomplicated birth without medical attendance. In reporting such a birth the line for the name of the physician is simply left blank, and many birth returns are made out in this manner. And so when unlicensed women assist at births, the cases stand before the law as being without medical attendance.

The law makes no mention of midwives whatever; hence they are without its pale and are irresponsible. The Boards of Health of our large cities compel them to register in their respective offices, but in the absence of legal recognition no qualifications can be required from the women presenting themselves for registration. They must receive all who apply and wait for a coroner's case or an indictment for manslaughter in order to obtain an opportunity to drive away incompetent ones; for any attempt to prosecute as illegal practitioners of medicine all those engaged in the practice of midwifery would not be sustained by the public sentiment of our large communities.

The mere fact that there are so many midwives is proof presumptive that they are needed. The vast majority of their patients are among the poor, who are unable to pay the fees that most physicians consider an adequate return for the service. These poor people live in few and small rooms, and even when able to afford the expense of a nurse have no place for her to sleep. The sleeping accommodations of

all tenement apartments are entirely inadequate. Badly ventilated at best, each pair of lungs is a tax upon the supply of oxygen; hence the fewer the residents, the better their health. The ordinary house-keeping duties of the poor are light and are easily assumed by the neighbor across the hall, so that the chief call for a nurse in an ordinary case of confinement in a tenement house is to cleanse the woman, renew the bed, and bathe the baby. All these duties are performed by the midwife, and it is this combining of the functions of medical attendant and nurse that makes her so useful. There are very few physicians who have the time or the willingness to undertake these many duties at the price that these people are able to pay. Midwives always avoid difficult or dangerous cases. They send in about forty-five per cent. of the birth returns in Brooklyn. It is estimated that only about two-thirds of all births are ever reported. Physicians are most careless in this respect but, after all allowances, it may be estimated that midwives attend at least one-third of the births of Brooklyn. I have made an endeavor to ascertain if they have more than their share of still-births, or, more than their share of cases fatal to the mother. No deaths escape reporting, so that death returns give more accurate knowledge than birth returns. A month was chosen at random and death returns and still-birth returns were examined to find out what proportion had been under the care of midwives. There were one hundred and fifty still-births reported during June, 1892. Of these the coroners certified to forty. Most of these, if not all of them, were attended by midwives. An inquiry addressed to twelve physicians, who reported still-births during the same months elicited the fact that, of the thirteen still-births reported, two were at first in the care of midwives. During the same month, eighteen women died of puerperal causes: of accidental hemorrhage, one; of rupture of the uterus, one; of convulsions, four; of septicæmia and peritonitis, twelve. Another letter of inquiry was addressed to the eleven physicians who reported these last twelve deaths and nine of them replied; of the ten fatal cases, two had been delivered by midwives. When we consider that only the easy cases are undertaken by midwives, the conclusion seems to be that they have more still-births than they ought. This large number of still-births is probably due to the delay in the second stage of labor, and would probably have been lessened by prompt application of the forceps. Nevertheless, the showing is not so discreditable as might have been expected in view of the entire absence of qualifications necessary to begin practice as a midwife.

As long ago as 1807 the Code Napoleon defined the duties of the midwife class. They were not to perform any operation endangering either mother or child, and they were to report all births promptly. In Switzerland, all midwives report quarterly to the medical officer of the district stating the number of births, the number of deaths, and giving a detailed statement of complicated cases. In Russia, women are compelled to study midwifery for three years with practical experience at the Polyclinic. At the close of this period, the applicant is examined by the Chief of the Midwifery School, and, if successful, receives a diploma. Before she can practice, however, she must pass an examination before the Professor of Obstetrics in the State University, who, being a governmental officer, grants the license to practice. In the German Empire, within the last year, the medical faculty have agreed upon an official text-book for students in midwifery. In it is taught both the necessity and methods of disinfection. It forbids midwives from extracting the placenta by the introduction of the hand and directs them to wait one half hour before using Credé's method. In case of hemorrhage, midwives are to send at once for a physician and to use ordinary means to arrest the flooding. Only in case of continued absence of the medical man and of imminent danger to the mother may they enter the uterus. They may not apply the forceps or perform podalic version unless the help of a physician cannot be obtained and the mother or child, or both, are in danger. If, in such case, they operate, they are to make a prompt detailed report of the case to the local health authorities.

The State of Minnesota is the only one that thus far has recognized midwives. Its law compels all persons beginning practice who are graduates in midwifery to present their diplomas to the State Medical Board. If these are genuine, a license to practice for one year is granted upon the payment of one dollar. If the candidate be not a graduate, the Board subjects her to an examination for which a fee of two dollars is to be paid. She is then licensed as before for one year. Persons already in practice at the time of the passage of the act are required to present proof of the same to the State Board and to be registered. The State Board may revoke or refuse licenses for unprofessional or dishonorable conduct or for neglect to make proper returns of births. The law does not apply to physicians or surgeons or to students of medicine or to gratuitous services in cases of emergency.¹

¹Med. Record, Vol. 42, P. 429.

If the State of New York finds it necessary to define the qualifications of him who performs the dangerless operation of filling a tooth, how much more necessary should it be to compel knowledge on the part of her who presumes to assist women at the time of pain and peril. If one is not allowed to sell flaxseed or compound licorice powder without a license, why not require a license from her who administers ergot to the mother and spiced syrup of rhubarb to the child, who treats uterine subinvolution by hypophosphites and ophthalmia by breast milk. Our community can no longer remain in its present state of slothful inactivity and two courses of action are open to it; the first, to enjoin midwives from practicing their profession; the other, to recognize them as it recognizes others practising a branch of medicine, to define their duties, to limit their rights, to prescribe their course of training, to make them responsible to the law, and to proscribe unlicensed practice. We have seen that the present state of public opinion would not countenance the first course of action. For this reason, if for no other, it would seem wise for our legislature to take the second course, and I believe the time is ripe to do away with the injustice of allowing one class of practitioners to be without legal qualifications while compelling all the others to come within the bounds of the law.

For these reasons the Legislature should take the following action. A law should be passed making it a misdemeanor punishable by fine to practice midwifery without license. To practice midwifery should be defined as attending women in child-bed for remuneration, or to expose a sign, or to circulate cards or other advertisements with one's name and the word midwife or one of its synonyms. Nothing in this act should be construed against an occasional delivery by a by-stander in case of the tardy arrival of the physician. All midwives engaged in practice at the time of the act should, within sixty days, present satisfactory proof of same to the local health board, and receive from it a certificate. This certificate is to be filed with the State Board of Medical Examiners, and upon its receipts the board shall grant a license to practice. From the provisions of the act should be exempted physicians, medical students and hospital internes. Are others wishing to practise midwifery, should be compelled to pass an examination before the State Board Examiners on the following subjects: The anatomy and physiology of the organs of generation, including the breast; the rudiments of general anatomy, including the changes that occur in the child at the time of birth; the physiology and pathology

of pregnancy, parturition and the puerperal state; the principles and methods of asepsis and antisepsis; the physiology of the new-born and the rudiments of ophthalmology. For this the student should pay a fee equal to one half of that paid by medical students. Upon passing the examination, the Board should issue a license to practice midwifery anywhere in the State, and this license is to be forfeited without renewal upon conviction of crime. The law should include the present law relating to nurses in cases of ophthalmia neonatorum. It should forbid the application of the forceps or the performance of podalic version, except in cases of emergency or where a physician cannot be obtained. In such instance a detailed report of the case, showing why the operation was performed, is to be submitted to the local board within three days. The law should also require prompt report of births, and of course prohibit a return of death or still-birth.

In conclusion I would say that I have no desire to pose as a champion of midwives or their enemy. I consider them necessary to the community and wish them better opportunities of learning and greater skill. I rather choose to defend the cause of those who employ midwives and have no protection against such as are ignorant or incompetent.

VESICAL TUBERCULOSIS IN THE FEMALE WITH SOME REMARKS ON THE TREATMENT.

BY STEWART PATON,

New York.

There are some essential and peculiarly interesting differences in the Natural History of Vesical Tuberculosis as it occurs in the female bladder, which differentiates it to some extent from the same disease in the male. These differences are more or less dependent upon morphological dissimilarity, not only of the bladder but of the urethra as well. The comprehensive appreciation of these points of difference is important to the pathologist but should be of especial significance to the practising physician to aid him in making a diagnosis as early in the

disease as possible. Too frequently after the symptoms have become well marked and the diagnosis assured the disease is no longer localized but has spread to other organs. A considerable proportion of phthisical patients have vesical trouble and the cystitis is often tubercular and secondary to the original infection, but the converse is also true, and we see cases where pulmonary or general tuberculosis follows the primary deposit in the bladder.

If we can effect a radical cure of primary vesical tuberculosis we surely cannot be too careful in studying the most minute phases of the disease and make every effort not to be led astray by its mimicries, so that at the earliest possible date we can not only offer the patient permanent relief from what are at times peculiarly distressing symptoms, but can absolutely prevent a pulmonary or general tubercular infection.

There is no phase of tubercular infection which is more often imitative and deceptive than vesical tuberculosis. Its symptoms are so often masked that it is not until nephritic or pulmonary symptoms have been unmistakably recognized, indicating the infection of those organs, that the real nature of the original vesical trouble is diagnosed. By the new and perfected methods for examination of the bladder and urine the possibility of an error in diagnosis is much less than it was a few years ago. As these become familiarized there will be fewer instances of vesical tuberculosis being overlooked until a patient's life has been imperilled by the development of phthisis or of general tuberculosis. Although the literature relating to vesical tuberculosis is considerable the statistics are so misleading and contradictory that it is not possible to say with absolute definiteness that primary vesical tuberculosis is more common in women than in men. Strümpell says that it is four times more frequently met with in the female than in the male bladder; while Winckel, on the other hand, says the reverse is the case. But the majority of clinical observers support Strümpell. If we compare the length of the female with the male urethra and consider the fewer obstacles that the tubercle bacillus has to overcome in gaining access to the female bladder, we can reasonably assert that after the authentic record of cases increases it will be seen that primary vesical tuberculosis is more common in the female than in the male bladder. This view is tenable if we adopt the statements of Verneuil and Venhé, and in fact the majority of observers who look upon the urethra as the way through which the tubercle bacillus enters the bladder and only in rare instances through the glomeruli of the kidney. In fact we may doubt whether the bladder is ever primarily infected by

the passage of the tubercle bacillus from the blood through the glomeruli of the normal kidneys. The statement is a purely theoretical one, and has not been substantiated by observation. In this connection we would refer to the experiments of Leube.

We will now rehearse briefly some of the symptoms which should awaken our suspicions of tubercular vesical infection. We refer only to primary vesical disease. The majority of cases occur in women between the ages of twenty and thirty-five but, as far as we know, no age is exempt. We question the statement of Guyon that a large *per cent.* of the cases are among that class of patients whom he says are typified by "*la santé floursante*." This would indicate a cachexia, a general expression of a local disease. This view would be as fraught with danger as the belief entertained by a larger number that "the cachectic appearance" is an important symptom of cancer of the uterus, a belief which has been the cause of sacrificing many lives. If there is "a cachectic appearance" there may be vesical tuberculosis but we can feel assured that the disease has spread to other organs and is no longer within our control. Cases of intractable cystitis which seem to be made worse by local treatment should always arouse our suspicions. This is particularly true if bright blood appears in the urine, generally a few drops at the end of urination. We must, however, bear in mind the fact that blood is often not found in the urine until a late period of the disease, and that hæmaturia is not at any time a constant symptom. Fenwick has referred in an interesting paper to the cases which simulate vesical calculus or a vesical neoplasm. The sound and cystoscope will then aid in establishing a diagnosis. In man a number of observers have called attention to an important symptom, namely the penile pain, as being characteristic of the disease, but we are not aware of any one having referred to the urethral pain, often very distressing, accompanying the disease in woman. We would emphasize this symptom particularly as we believe it is present in a majority of the cases. Patients generally describe it as a "throbbing pain" in the urethra, and it is often so severe as to detract attention from the bladder. We have observed it in cases where there was no tubercular lesion discoverable either at the neck of the bladder or in the urethra; and although in some cases the pain is attributable to these causes, in other cases we cannot at present account for the persistence of this obstinate and painful symptom.

The character of the urine should be carefully noted. It is generally limped, pale yellow or straw color, and at times of marked hyper-

acidity. It may or may not contain bladder cells from the superficial or deeper layers of that viscus, but we frequently find countless numbers of bacteria present. The bacteria are of the ordinary fermentative variety, and among them we may occasionally differentiate by staining the bacillus tuberculosis. We should also make use of the centrifugal apparatus and even after the failure of these methods in demonstrating the presence of the tubercle bacillus we can resort to the method of injecting guinea pigs and see if tuberculosis develops. Considering the inherent difficulties in establishing a diagnosis and in view of the fact that an early diagnosis is of the utmost importance to the patient, this method is entirely justifiable.

We will now briefly rehearse the history of two cases which have come under our observation. It is only just to say that in the first case the diagnosis was never certainly established, but it is an example of a large number of cases which are as difficult to diagnose correctly as they are to treat successfully. In the second case the diagnosis was made beyond a peradventure.

Miss X. Age 20. Family history negative as regards tubercular disease. Menstrual history began at 14. Regular. Twenty-eight daily. Duration five days. Dysmenorrhœa since development of vesical troubles. In fall of 1890 patient began to complain of frequency of micturition. She had to get up several times at night and had to pass her water every two or three hours during the day. Micturition not painful. No hæmaturia. Considerable pain at times in "the small of the back," and over the hypogastric region. This pain was not influenced by diet, atmospheric changes or posture. These symptoms gradually became worse until November, 1891, when she came to New York for treatment. The urine was hyperacid in reaction; a murky lemon color. No marked odor. Sp. Gr. 1015-1030. No albumen. No evidence of kidney lesion. Considerable mucus, and countless bacteria, the ordinary fermentative bacteria but no tubercular bacillus could be demonstrated. There were numbers of bladder cells from the superficial and some from the deeper layers of the viscus. The patient was put on as plain and nutritious diet as possible. Acids and all irritating substances were eliminated from the regimen and the bladder was washed out with various solutions, cuolin, boric acid, bichloride of mercury, nitrate of silver and emulsions of iodoform. All of these washes were given a fair trial, and all that was accomplished was to make the patient more uncomfortable by increasing the irritability of the bladder, and in addition to this blood began to appear in the urine,

generally a few drops at the end of micturition. Bladder held 3x. Internal medication was of no avail. Salol, betol, the potash salts were all given a fair trial. A cystoscopic examination was made and on the base of the bladder, near the posterior wall, two small hyperæmic spots were discovered. The rest of the surface of the bladder was a pale yellow, and the vessels all over the surface of the bladder was slightly more prominent than normal. As the symptoms had become very distressing, Dr. Thomas opened the bladder by a suprapubic incision, and the two small spots discovered by the cystoscope were thoroughly cauterized with nitrate of silver (3j to 3j). A tube was left in the bladder, and the bladder was drained for three weeks. While the tube was in the patient experienced considerable relief but after its withdrawal some of the old urethral pain and tenesmus returned. The urine was less acid in reaction and there was marked diminution in the organic elements. The patient's convalescence was long and tedious, and at present, ten months since operation, reports only partial relief from vesical symptoms. Although the tubercle bacillus was never demonstrated in the urine we may, with some certainty, infer from the persistency of the symptoms and the character of the urine that it was present.

The second case was unquestionably one of tubercular origin.

Miss X. A native of Germany, 35 years of age. Father died of cancer. Mother died of consumption. The patient has marked tubercular affection of both lungs. The pulmonary symptoms developed two years ago and had been preceded by distressing vesical symptoms of four years duration. Six years ago patient began to complain of frequency of micturition. This gradually grew worse until one year ago. Since that time the patient has only been able to hold her water for half an hour. Two years ago patient began to have considerable urethral pain. The pain was not influenced by micturition or by posture. The urine was acid in reaction Sp. Gr. 1015-1022, cloudy, and contained a slight trace of albumen, also quantities of red blood corpuscles, bladder cells and bacteria. On an average patient passed 3xxxv in twenty-four hours.

Cystoscopic Examination.—This was made with difficulty as there was so much blood present. The vesical vessels were unusually prominent. No blood could be seen issuing from ureteral orifice, but on the base of the bladder two irregular spots of ulceration could be seen. The ulcers were small, the margins sharply defined and of a pinkish color. There was no incrustation seen over the

ulcers as is observed in cases of simple non-tubercular ulceration. The pain in the bladder was so great and the organ was so irritable that it would not retain any of the ordinary solutions, creolin, boracic acid, etc., even iodoform emulsions caused acute pain. The patient suffered so greatly that she was willing to submit to any form of treatment even if only temporary relief was afforded. For several days prior to operation the patient was put upon small doses of salol frequently repeated to render the urine as innocuous as possible. A suprapubic cystotomy was performed with the assistance of Dr. H. M. Painter. The ulcerated surfaces were very thoroughly curetted with a sharp uterine curette and then touched with solution of nitrate of silver (3j to ʒj). No attempt was made to close the bladder and the viscus was drained by the method advocated by Dr. Bangs. The bladder was kept open and drained in this way for three weeks and the tube was then removed.

For four months following the operation the improvement in the patient's condition was very marked. The vesical and urethral pain entirely disappeared and she was able to hold her water for four hours without the slightest inconvenience. Her pulmonary symptoms gradually grew worse. An examination with the cystoscope showed that the ulcers had entirely healed. Four months after this the vesical irritation and pain returned and blood appeared in the urine. The patient was admitted to Dr. Nicoll's service in the Woman's Hospital and was found to be suffering from a recurrence of the tubercular ulceration, not, however, in the old cicatrices but in a new spot. Although the recurrence was unfortunate it was not unexpected and the patient had been warned about it before the operation. We do not think that recurrence invalidates the success of the operation. The patient for four months was given relief that exceeded our anticipations and had the bladder only been infected we feel confident that the cure would have been permanent.

The comparison between the two cases is very striking. The second in which the symptoms were more distressing than in the first, the vesical and urethral pains greater and as inspection showed the lesions of the bladder wall more marked, was benefitted by the use of the curette. In connection with this case we mention Battle's case, the first case reported where curettage of the bladder was used in the treatment of tubercular ulceration of the bladder. The result was a cure.

We believe that the treatment of vesical tuberculosis in women, when there are ulcers visible with the cystoscope, is limited to opera-

tive interference; and that the suprapubic operation at present is preferable to any other we believe is substantiated by the results. The operation is not a difficult or dangerous one and a satisfactory view of the whole bladder is obtained and the ulcerations can be thoroughly scraped and cauterized. If a vesico-vaginal fistula is established the bladder cannot be thoroughly inspected and the ulcers cannot be curetted as advantageously as by the suprapubic method, while the fistula itself may be very difficult to deal with later. Cauterization alone is not in all cases sufficient to arrest the disease, and the same may be said of cauterization combined with drainage, which by some is considered all-sufficient. Certainly the curette carefully used before cauterization so as not to penetrate the bladder cannot do any injury, and the results obtained by this method are particularly gratifying.

Drainage alone gives no permanent relief in cases where the tubercular bacillus has been demonstrated, and to leave a tubercular ulcer to obsolesce when it can be dealt with with little or no risk to the patient is as unsafe as it is unsurgical. In cases where the disease has advanced to such a stage as to result in penetration of the bladder wall if the curette is used we believe the total excision of the diseased surface is justifiable, the opening in the bladder wall to be closed by fine catgut sutures. Instead of the cauterization with nitrate of silver we may use either lactic acid or the Paquélin cautery. While we are conscious that the records of these cases do not mark "brilliant successes," they undoubtedly are of importance for two reasons. In the first place they emphasize the importance and difficulty of making an early diagnosis; and in the second place they show the futility of all except surgical means in the treatment of vesical tuberculosis.

PELVIC VERSION.¹

By T. J. MCGILLICUDDY, M. D.

Surgeon to The New York Mothers' Home Maternity Hospital. Surgeon in charge Yorkville Dispensary and Hospital for Women and Children.

Mr. President and Fellows: The subject of version might, with advantage, be entirely re-written, for the text-books in use to-day give but a portion of the important facts connected with it, and it would well repay our writers on obstetrics to again carefully study and review this whole subject.

I would divide version into three classes, which may be named in the order of their desirability and importance, as follows:

- I. Cephalic,
- II. Pelvic,
- III. Podalic.

This is the ideal classification, and there can be but little doubt that it is the correct one. (Fig. 5.) Pelvic or breech version is mentioned by some writers on obstetrics, but it is generally considered as synonymous with podalic version, and the indications for its employment are not by any means well understood. Cameron, in "The American System of Obstetrics," says: "As the foetal ovoid has but two poles, the cephalic and the pelvic, the foetus must be turned to one or the other of them. When it is turned to the head, the operation is called *cephalic* version; when turned to the breech, *pelvic* version. Podalic version, or turning to the feet, is a variety of pelvic version and should be classed as such."

The operation of pelvic version has not yet been properly described, and its advantages are known only to a very few; hence, it has seldom been performed manually. Obstetric works rarely even refer to it and, if they do, half-a-dozen lines are considered sufficient space to devote to a description of it. This systematic neglect of such an important operation seems to me a most unfortunate error, and one which should have been corrected long ago by practical obstetricians.

Spontaneous pelvic evolution (Figs. 1, 2, 3,) is said to be of quite common occurrence, and I think it would be much more frequently

¹Read before The New York State Medical Association, November 15, 1892,



FIG. 1.



FIG. 2.



FIG. 3.

observed, if special attention were directed to it, and if obstetricians were not so prone to interfere with Nature's methods. It is more easily accomplished when pregnancy has only advanced to the seventh or



FIG. 4.

eighth month, and it is possibly more common at this time than later on in pregnancy, when the child is larger. Velpeau cites one hundred-and-thirty-seven cases of spontaneous evolution. Where the child is

dead, and the shoulder low down in the pelvis, the uterine contractions, aided by the anatomical conditions present, readily cause the spine to become doubled on itself anteriorly, for, the abdomen having no bony structure, and the spinal column no spinous processes in front, anterior flexion is easily effected. Spontaneous *pelvic* evolution is a more common occurrence than spontaneous *cephalic* evolution. The latter is quite rare, and is due to the same factors operating in the opposite direction.

In spontaneous pelvic version (Fig. 4,) the breech presents, while the head and trunk pass towards the fundus. This is of much more frequent occurrence than the preceding, but it could not take place when the uterus is retracted and moulded to the fœtus. The natural mechanism of spontaneous pelvic evolution can be readily imitated by art, because artificial efforts tend to supplement and assist the natural ones; indeed, they follow in the line of Nature's method of delivery. Pelvic version in these cases is simply the imitation artificially

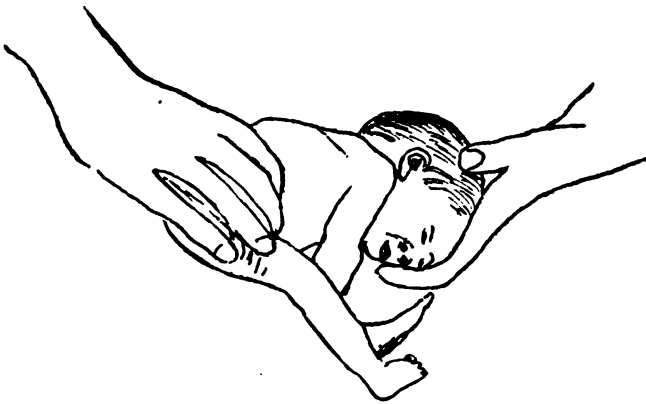


FIG. 5.

of spontaneous pelvic evolution (Fig. 4,) and is especially indicated in transverse presentations. This method of delivery, however, has seldom been attempted by artificial means. According to Kleinwachter, it is indicated in cases where the pelvis lies nearer the inlet than the head does, and where cephalic version would be difficult or impossible. It may be performed by external manipulation alone, but is more easily accomplished by the combined method. When this method is chosen, the fingers of the obstetrician should be inserted in the child's groin, or over the crest of the ilium (Fig. 5), and the breech

drawn down into the pelvic basin. Extraction can then be easily performed, if the child be small; or, if large, and it has been decided not to wait for the natural delivery, the forceps may be applied to the breech.

Spontaneous expulsion, as a result of the uterine contractions, may take place in transverse presentations, where the shoulder presents and the body is fairly engaged in the pelvis. Denman cites several cases in which this has occurred, but we should not think of depending upon nature to effect delivery in this way. Where artificial delivery has been resorted to under these circumstances, it has been the custom heretofore to perform *podalic* version, but instead of this I would recommend the performance of *pelvic* version. Its advantages over podalic version in cases of transverse presentation may be summed up as follows:

- (1) It is a much simpler operation, as it simply converts the case into an ordinary breech presentation.
- (2) It necessitates the introduction into the uterus of the fingers only, whereas podalic version requires the introduction of the whole hand and arm.
- (3) It is only necessary to move the child sufficiently to draw down the breech, while in most cases of podalic version the body of the child must be made to rotate around the whole cavity of the uterus. (See Figs. 6, 7).
- (4) There is much less risk of rupture of the uterus.
- (5) The operation is attended with much less shock.
- (6) For the foregoing reasons, the mortality for both mother and child is much less than in podalic version.

Now, in podalic version (Fig. 7), the body and head must ascend to the fundus before delivery begins, thus making the circuit of the interior of the uterus. This does not occur in pelvic version, for the breech is drawn down at once, and in doing this, it does not traverse, at the most, more than one-fourth of the circuit of the uterine cavity. If the uterus be strongly retracted over the body of the child, podalic version is extremely hazardous, both on account of the profound shock which it produces and the great liability to uterine rupture.

Podalic version is often of doubtful utility, and the writer firmly believes it has been elevated to a position which it does not merit. It is often employed for conditions in which the forceps or pelvic version is indicated, and its performance in cases where there is thinning of the

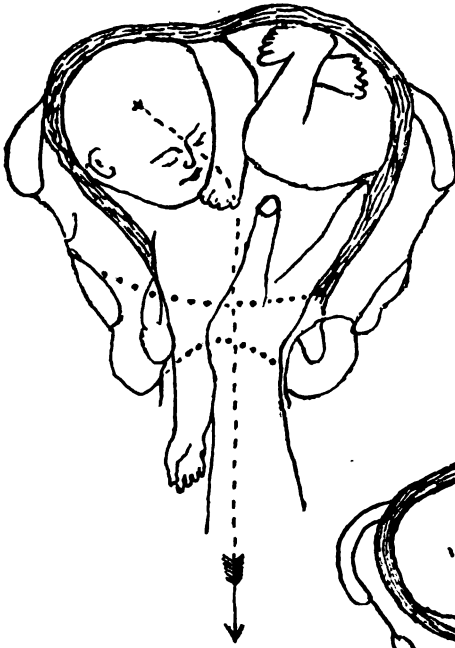


FIG. 6. PELVIC VERSION.

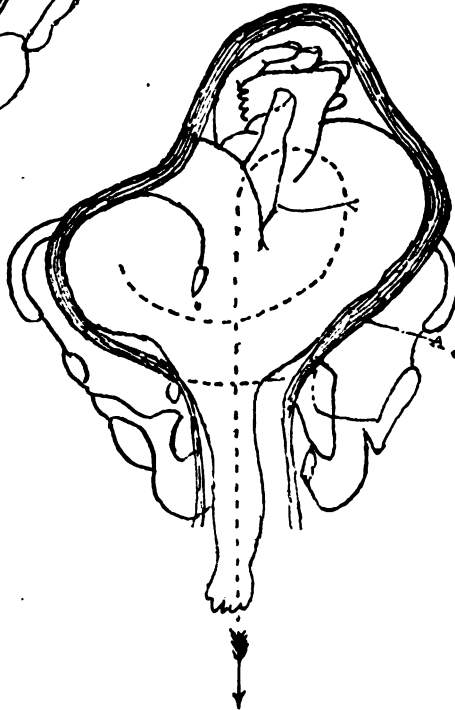


FIG. 7. PODALIC VERSION.

lower segment of the uterus has been responsible for many deaths from shock or from uterine rupture.

In cases of transverse presentation, where the child is alive and movable, and no great force is requisite, cephalic version (Fig. 8,) should be attempted in the intervals of the pains, while the uterus is thoroughly relaxed by means of morphia or chloroform. If this fail, it will usually be found that pelvic version is practicable. If an examination during

the last month of pregnancy shows that the presentation is not cephalic it should be made one, and if during labor the presentation is found to be neither cephalic nor pelvic the child should be immediately turned so as to make the case one of cephalic or pelvic presentation, and then this position carefully maintained. In turning the child, the pressure should be made in such a way as to shorten the long axis of the foetal ovoid, and to place it in proper relation to the pelvis. Pressure should be made, therefore, externally upon the head and breech, thus pro

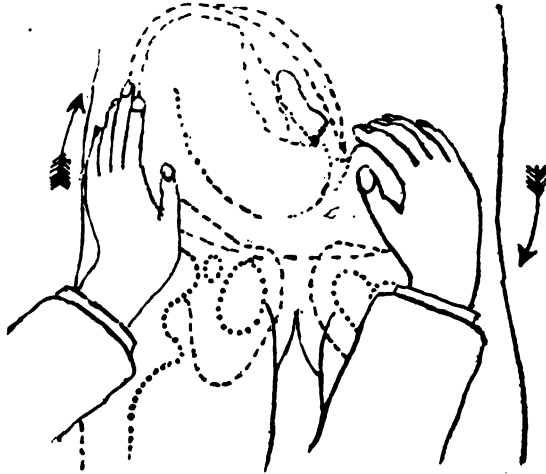


FIG. 8.

ducing flexion and approximating the two poles of the foetus. If this external manipulation be not successful, the external hand should be made to press the head and shoulder of the foetus upward, not too strongly, while the internal hand draws down the breech. If much force be required, the breech may be drawn down by the thumb and two fingers of the operator grasping the foetal pelvis with their extremities on the iliac crests or in the groins (see Fig. 5). After the completion of version, if immediate extraction be indicated, it may be accomplished by continuing to make traction with the hand—this is, however, sometimes very difficult—or by using for this purpose the forceps, fillet, blunt hook, or, in some cases, my compression-forceps. All this may seem very radical, but it is in the line of progress. It is important not to confound version and extraction, for they are two distinct operations, and each has its own special indications.

Pelvic version is especially useful in those unfavorable cases in which the arm presents, with the shoulder pressed well down into the pelvis, where the liquor amnii has been discharged, and the uterus is retracted on the child's body. Here, podalic version is usually out of the question. Podalic *extraction* certainly has advantages which should be borne in mind, but it must not be confounded with podalic *version*, which has been recommended for so many different conditions. The recent additions to our knowledge, derived from abdominal palpation and the other improvements in obstetrical science, lead me to believe that it is far from being a panacea for all obstetrical ills; indeed, I think that it is rarely necessary. In a pelvis of fair dimensions and with a child of moderate size, pelvic version is not a difficult operation, and when carefully performed there will rarely, if ever, be any need for decapitation or evisceration.

The following case, which is illustrative of a large class, will, I think, serve to show the indications for pelvic version:

Mrs. W., twenty-five years of age, the wife of a physician. Her first pregnancy was normal, and nothing unusual occurred during the second pregnancy until the ninth month was reached, when an accidental blow on the abdomen caused slight uterine hemorrhage, which lasted for a few days and was followed by labor pains. On examination, her husband found a dorso-anterior transverse presentation, which he attempted to rectify under chloroform by performing podalic version. Owing to the development of some alarming symptoms, he desisted and gave her some Magendi's solution to quiet the pains, pending my arrival. I found the patient well narcotized, and the uterus completely retracted on the body of the child. The patient had had more or less pain for two days. The left arm of the child and about two feet of the umbilical cord protruded from the vulva. The hand and arm were bluish and swollen, and the cord was cold and pulseless. Owing to the retraction of the uterus, and the moulding of it to the body of the child, ordinary podalic or cephalic version was, of course, inadmissible. As the head of the child lay towards the right, I introduced my right hand, slipped my fingers into the child's groin, and brought down the breech, following Nature's method. I was in this way able to quickly and easily effect delivery. (Fig. 6.)

A NEW OPERATION FOR PROLAPSE OF THE ANTERIOR
WALL OF THE VAGINA FOLLOWING REMOVAL
OF THE TUBES AND OVARIES.¹

BY THOMAS ADDIS EMMET, M.D.

Miss A. B., aged 24, was admitted eighteen months ago to my service at the Woman's Hospital. Her previous history was one of frequent attacks of local peritonitis in connection with painful menstruation, for which her tubes and ovaries had been removed by another surgeon about five years previous to her admission under my care.

Several months after this operation, with the final cessation of menstruation, she began to be relieved of pain in the region of the left ovary and her nervous symptoms improved. But she continued an invalid in consequence of a new train of symptoms which were then developed; the most marked of these being a "bearing-down" feeling on assuming the upright position, with frequent desire to empty the bladder and with an almost constant pain on the top of her head. So long as she remained lying on her abdomen she was comparatively free from pain. She was a school-teacher and she found herself less able to teach under the new set of symptoms than under those which formerly existed, when for at least a portion of the month she was comparatively comfortable.

I found the vagina shortened and the uterus atrophied, as is usually the case after cessation of menstruation, but a large cystocle existed with prolapse of the bladder as though the parts had been forced down upon the urethra. The appearance of the prolapse was little different from the same condition found in old women who have borne a large number of children without having had professional care or proper rest after confinement. For the relief of these cases among old women I have, in a number of instances, begun my denudation about an inch in front of the cervix to make a broad V-shaped surface, extending it backward on each side and well up into the cul-de-sac. After introducing the sutures and bringing together the denuded surfaces, the cervix is covered in and the whole uterus lifted an inch or more in the

¹From the Transactions of The New York Obstetrical Society, January 17th, 1893.

pelvis. By lifting the uterus and by relieving the prolapse of the tissues, the pelvic blood-vessels are enabled to again become tortuous or convoluted. The direct effect upon the vessels of this return to their normal position is a lessening of their calibre and of over-distention. Thus the sense of weight and "bearing-down," the most marked symptoms of this condition, are at first diminished and finally relieved.

In this case I operated in the same manner as I had done twice previously under like indications. The apex of the V-shaped denudation began at the neck of the bladder, extended along the anterior wall to each side of the cervix and nearly to the end of the posterior cul-de-sac of the vagina. As soon as the sutures were secured the cervix could no longer be seen, but by introducing the finger into the cul-de-sac between the two folds thus formed, it could then be felt resting upon a firm shelf, which had been formed by the operation I have described. At the same time it was easily appreciable that the uterus had been lifted well up in the pelvis.

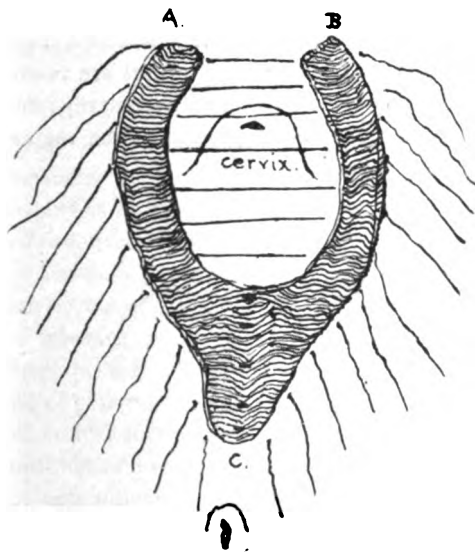


DIAGRAM SHOWING V-SHAPED DENUDATION ON ANTERIOR VAGINAL WALL. SUTURES IN POSITION. PATIENT ON KNEES AND CHEST.

I have received a letter within the past month from this woman who reports herself entirely relieved from all her old symptoms and in perfect health. The same result followed the operation in one of my

other cases, but I have never been able to ascertain the condition of the third case after her discharge from the hospital.

The condition I have described is not an infrequent one after removal of the tubes and ovaries, and this is due in great measure to the fact that the tying of the ligatures, in the formation of the stump on each side, forces the uterus lower in the pelvis than it should normally be. In this state of prolapse the blood-vessels can no longer maintain a convoluted condition and the more they approach a straight course the more distended they become. The Emmet-Sims operation for the relief of prolapse of the anterior wall does not lift the uterus, because its only object in the relief of procidentia is to prevent the latter from coming forward toward the vaginal outlet. But when the line to be united is carried on into the cul-de-sac beyond the cervix, the uterus is distinctly lifted. I am unable as yet fully to explain to my own satisfaction how anatomically this effect is obtained.

After making the V-shaped denuded surface and introducing the sutures, if we change the position of the patient from the left side to that of the knee and-chest, the outline as represented by the diagram will then be presented. It is evident that a firm shelf is thus formed for the support of the uterus when the sutures are twisted, and that the cul-de-sac formed about the cervix must necessarily remain open at the upper end of the vagina where a portion of the vaginal surface is left undenuded with this object.

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EDITORIAL.

MALE CIRCUMCISION IN ITS RELATION TO GYNÆCOLOGY.

While we work unceasingly to cure disease by discovering and attacking its *immediate* cause, while our literature teems with earnest suggestions in regard to *immediate* prophylaxis, it still is comparatively few, (and these are found rather in the ranks of philosophers than of physicians), who seriously consider those *mediate* and ethical causes which make many forms of disease a logical sequence. We occasionally hear of the ignorant short-sightedness of our grandmothers and great-grandmothers in the matter of tight lacing, insufficient under-clothing and lack of general hygiene, but how often do we hear of the habits of life and ethical surroundings of their husbands and sons as a factor in the condition of gynæcological disease to-day? Very clearly do we appreciate how unjust to the health of woman are the demands of modern social life, and very general are the efforts made to make women heed this fact. We must not, however, overlook the other fact that the man's physical condition plays an important part in the causation of woman's disabilities and that any means by which this evil influence can be lessened is at once a prophylactic measure in Gynæcology. Such a measure, if it came into general use, we believe *circumcision* would be.

The great Covenant which God made with His Chosen People, by the terms of which the prepuce of every male child must be circumcised, was no mere arbitrary ruling nor childish mystery. The more we read the history of the primitive Jewish people in the Old Testament the more impressed must we become with the Wisdom which guided them in their ignorance and safe-guarded them by mysterious and stringent laws, which alone could have restrained and saved an unthinking, fickle, and passionate race as were the ancestors of the Jews. In this very matter of the rite of circumcision, which to them was only a divinely ordained mark of their superiority to all other nations, we can now see in the light of modern knowledge a Providential means for the preservation of a race. Among the great nations of antiquity, which surrounded them, every species of sensuality was freely indulged in and many forms of venereal disease were universally prevalent. It is known beyond peradventure that gonorrhœa and bubo, chancroid and, probably, syphilis were almost as general then in the East as they are with us to-day. Among the Jews, whose constant tendency was to amalgamate with the surrounding Gentiles, in spite of race prejudice and stringent laws, the fact that every male had been circumcised in infancy was a most potent factor in saving them from wide-spread venereal disease and the consequent deterioration and decimation, which befell their more cultivated and luxurious neighbors. In hot climates, among a rude and agricultural folk, cleanliness has never been a distinguishing trait, and the early exposure of the glans penis hardened that member and saved them from the results of unwise sexual exposure, as well as from the effects of retained smegma with its train of evils, such as balinitis, urethritis, abrasions, and a thin and sensitive mucous membrane; all of which would otherwise have been incidental to their manner of life and are most favorable conditions for more serious venereal invasion. It is a recognized fact that mucous membrane when long and constantly exposed to the air partakes almost of the nature of true skin in its toughness and ability to resist injury. This fact is also recognized by all civilized nations of the East to-day, except Christians, for circumcision is of universal application among them.

Although our remarks so far have been largely of an archæological nature, the application of our observations lies not in the gynæcology of the primitive Jews but in that of our own day. Venereal disease is far more common now than in the past, because communication among peoples is easy, poverty and luxury are greater, thorough

cleanliness, except among the few, in no greater favor, and vice as prevalent. The wretchedness of married women from the effects of gonorrhœa contracted from their husbands is a shame to manhood and a disgrace to medical knowledge. To say nothing of the innumerable lives sacrificed by Tait's and kindred operations for purulent salpingitis, of the many cases of peritonitis and of pelvic abscess equally traceable to this origin who have died without operation, we need only consider the suffering entailed by long-endured pelvic peritonitis, vaginitis, cystitis, and inflammation of the vulvo-vaginal glands, constantly relighted by marital intercourse, to realize fully the widespread results of gonorrhœa in man.

Accepting human nature as it is, then, why do we not more strenuously endeavor to anticipate the serious effects of man's acts where they entail physical punishment? If we cannot eradicate uncleanness and gonorrhœa, can we not do something to minimize the effect of the former and to lessen man's chances of contagion? Does not circumcision meet fully these indications? Have not physicians a grave responsibility in this matter and should they not urge upon parents the importance of male circumcision?

RECENT FOREIGN PUBLICATIONS.

BRION, PAUL, *Étude critique sur 530 cas d'avortement.* Paris. \$0.90.

LÖHLEIN, H., *Gynäkologische Tagesfragen, nach Beobachtungen in der Giessener Universitäts-Frauenklinik besprochen.* 3. Hft. gr. 8°. \$0.75.

VII. *Zur Diagnose u. Therapie d. Gebärmutterkrebses.* VIII. *Zur Ventrifixation der Gebärmutter.* IX. *Die Verhütung fieberhafter Erkrankung im Wochenbett.* (S. 161—264 m. 2 Taf.)

DE SIEBOLD, ED. GASP. JAC., *Essai d'une histoire de l'obstétricie.* Tradins de l'Allemand avec additions, figures et un appendice par F. J. Herrgott. 3 vls in 8°. LVII—342, 697, VII—451 pages. Paris. \$11.

These books may be obtained from L. Hydel, 212 E. 50th St., New York. Delivered in New York at the prices above stated.

THE STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M. D.

A Rare Complication of Cystocele.

Dr. RHEINSTADTER (*Centbl. für Gyn.* 1892, No. 36) reports an interesting condition present in a case of cystocele. The vagina was filled with an egg-shaped, elastic tumor about the size of a man's fist. Its walls were thick, and it was covered with smooth mucous membrane. A small opening was detected at one side which was looked upon as that of one of the tubes. The tumor was considered to be an inverted uterus. Two days later when the patient was re-examined the tumor was in the form of a flaccid, whitish, thick-walled sac which now was easily diagnosticated as a cystocele. The small opening proved to be the os externum. The condition found at the first examination was probably due to a torsion and strangulation of the cystocele sac as it was impossible to pass a catheter into it. This is, according to the author, the first case of the kind on record.

On the Treatment of Uterine Adnexa Especially in Reference to the Influence of Curettage.

P. BAZY (*Archive génér. de Méd.* 1891, Juni, Juli; *et ibid*) writes particularly to warn against the too frequent resort to coeliotomy. It fails often enough in its object and renders the woman sterile. Dilatation and scraping out of the uterus are the operative procedures one should first employ. This course often succeeds even in cases of long standing. He has never observed any harm or untoward effects from it. A number of reports of cases are embodied in the paper.

A Case of Tubo-parovarian Cyst.

Prof. DEMETRIUS V. OTT (*Centbl. für Gyn.*, 1892, No. 37). The literature as yet is very scant and defective relative to the communication between the lumen of a tube and an ovary that has undergone cystic degeneration. The possibility of a connection between a dilated tube and a cystic parovarium has not, as far as the author knows, been mentioned in literature. The case is related in detail, and for a prop

estimation of its value from a pathogenic point of view we must refer our readers to the original.

The Etiology of Prolapse of the Uterus and Vagina.

Dr. RÜTER (*Ibid*) performed ventrofixation on a case of prolapse of the uterus and vagina about three years ago, and was surprised six months later when the woman returned complaining of the old symptoms. On examination he found the anterior vaginal wall and bladder forming a tumor, the size of a hen's egg, and pressing apart the labia majora. The symphysis stood high, and in consequence of this the vulva was directed far forwards. The abdominal wall showed a firm cicatrix at the point where the uterus was fixed six months before. It was still there, but the abdominal walls were so flaccid that they lay against the vertebral column. He attributed the prolapsus in spite of the firm fixation to the conformation of the woman's pelvis. Since then he has measured the angle of inclination of every woman's pelvis suffering from uterine prolapsus and has found it to vary from 24° to 45° . Women with such pelves are predisposed to prolapsus of the uterus and to hæmorrhoids. The best plastic operations and the firmest fixations of the uterus to the anterior and posterior walls or to the bony parts will be attended only with temporary success as long as the abdominal pressure is not removed from the pelvic floor. Perhaps in this circumstance lies the keynote of explanation of the wonderful results obtained by Thure Brandt's method. The cases with total laceration of the perineum in which there has been no descent of the uterus or prolapsus of the vaginal walls may, the author thinks, also be explained by the angle of inclination of the pelvis.

Galacteal Fistula.

S. CHOLMOGOROFF (*Centbl für Gyn.* 1882, No. 38), relates an interesting case of this kind. The woman became pregnant after the fistula was healed. As a rule pregnancy diminishes the secretion of milk in the breasts, but in this case the opposite occurred. The flow of milk with the discharging pus had been slight until the second month of gestation when it increased to a marked extent and did not diminish at the fourteenth week of gestation. The case is reported extensively in the original.

Retro-peritoneal Serous Cysts.

Obaliniski (*Wiener Klin. Woch.* 1891, No. 39 *Ibid*) offers as a contribution to the differential diagnosis of abdominal growths, the history

of a woman fifty-seven years of age who presented a tumor the size of an adult head in the right side of the abdomen. As it was not connected with the uterus or adnexa it was looked upon as a hydronephrosis or echinococcus cyst. At the cœliotomy the very thin-walled tumor was seen to be covered with peritoneum from the posterior abdominal surface. It contained three litres of a clear watery fluid which showed traces of earthy phosphate, 0.12 per cent. of albumen and a relatively large amount of chlorides. On the other hand urea or uric acid could not be detected. Healing occurred by primary intention. As the right kidney could not be found the author made the diagnosis of hydronephrosis although residua of kidney substance or of ureters could not be detected in the walls of the cyst. It was only after studying the work of Przycowski and Gallez that he came to the conclusion that it must have been a retro-peritoneal cyst and recalled another case which probably belonged to this form of growth. In conclusion the author states that retro-peritoneal serous cysts are not so rare as is generally believed, that they occur in males as well as in females, that they usually lie in the neighborhood of the kidneys, and probably take their origin from the Wolffian or Müller's bodies, that they produce symptoms only when they have reached a relatively large size and that, though they can be removed by repeated puncturing, a radical extirpation is to be recommended.

A Case of Prolapsus of the Female Urethra.

M. GRAEFE (*Centbl. für Gyn.* 1892, No. 39.) reports the history of a case of this rare (?) affection. The patient was a girl eight years of age who presented a polyp-like tumor the size of a tonsil in the vicinity of the urethra. This had appeared six months before and every now and then became inflamed. Dr. Graefe removed the mass with the knife, suturing the urethral mucous membrane with the outer edge of the wound. The patient made a good recovery, the permanent catheter being removed in three days and the sutures in six days.

Dr. KLEINWACHTER has recently written at length on this subject (*vide Zeit. für Geb. and Gyn.* B'd XXII, p. 40) and collected one hundred cases from literature covering the period from the year 1732. The affection occurs usually in delicate strumous children but Graefe's patient was healthy and robust.

Symphysiotomy with Recovery of Mother and Child.

Dr. V. VELITS (*Centbl. für Gyn.* 1892, No. 40) reports a case of this kind in a girl twenty-one years of age, whose first two children were

sacrificed by craniotomy. The operation offered no difficulties and the symphysis separated four cm. Twenty-two days after delivery the patient walked with ease and four days later was discharged from the hospital.

Carcinoma of the Labium Minus, Portio Vaginalis and Mamma.

Dr. ZEISS (*Ibid*) removed in 1887 a small tumor from the left labium minus of a healthy-looking peasant woman thirty-eight years of age. The tumor microscopically proved to be a cancrroid. She remained well until 1890 when, after the birth of a child a small nodule appeared in the left breast. When she presented herself again in February of this year she had an inoperable carcinomatous ulceration of the portio vaginalis but the cicatrix on the labium was healthy and the inguinal glands were normal. The left breast showed an undoubted carcinomatous nodule.

Gonorrhæal Infection in Woman and its Consequences.

BUMM (*Muench. Med. Woch.*, 1891, No. 50 and 51) writes at length on this subject. His experiences show that gonorrhæal infection does not pass readily to the tubes and peritoneum. The external and internal os form usually a barrier against the entrance of the gonococci into the uterine cavity. This barrier may be broken down by the process of menstruation, by the puerperium and by therapeutic manipulations. The infection of the uterine cavity manifests itself by high fever, chills, severe uterine colic, a sero-sanguinous flow, and later on by a purulent discharge. During the acute and chronic stages there is extreme tenderness of the organ which is frequently excited anew by fresh exacerbations of the inflammatory process. If the process attacks the tubes it is not long before the peritoneum is also involved. The inflammatory process in these structures does not present a true gonorrhæal form, for the gonococci thrive but poorly on serous surfaces; it partakes rather of a septic form as the author has shown experimentally by inoculations into the peritoneum of rabbits. He does not believe that the infection passes to the endometrium and tubes in more than a third of the cases, in the remaining two-thirds it is limited to the cervix and urethra. It is difficult to collect reliable statistics on this subject, for in venereal clinics only fresh cases are seen, which are soon lost sight of and in gynæcological clinics there is an accumulation of the serious cases, and lighter forms of the disease are likely to be overlooked. A true picture can only be obtained when cases of all

degrees of infection are observed until they are cured, or for a long time. The author analyzed fifty-five cases in his experience which embody the latter conditions. Of these fifty (91 per cent.) had gonorrhœal urethritis; forty-one (74 per cent.) had gonorrhœal cervicitis, and only in eight (14 per cent.) was there an infection of the uterine cavity, and only in two (3.6 per cent.) were the tubes affected.

Symphysiotomy.

M. CHARPENTIER (*Nouv. Archive d'Obstetrique et de Gynécologie*, 1892, Nos. 5 and 6) treats this subject at great length and makes the following deductions: 1. Practiced in cases with a pelvis measuring from eighty-five to sixty-seven millimetres, it is an operation which gives excellent results. By it the mother and child are saved, and the accoucheur escapes the cruel necessity of killing a living foetus, or waiting for the death of the foetus to the great danger of the mother. It has a limited field, its indications are clearly defined between premature induction of labor and Cæsarean section. Like Cæsarean section, embryotomy will become an exception, and may be driven entirely from the field of obstetrical surgery by symphysiotomy.

"I hope it will be with this operation, of entirely French origin, as it has been with many another which after having been invented by us, and allowed to fall into disuse, has come back to us from the hands of strangers, triumphantly, to be put in general practice for the great benefit of humanity."

The Surgical Treatment of Chronic Suppuration in the Pelvis.

TH. LANDAU (*Berl. Klin. Woch.* 1892, No. 38) makes the subject of tumors and growths which have undergone suppuration the chief burden of his paper. One must attack a tumor radically which has caused a suppurative process though not enclosing an abscess itself, *e. g.*,

1. Ovarian tumors, if they suppurate and infect the peritoneum causing a peritonitis, must be removed by ovariectomy.
2. Suppurative fibroids with abscess metastases. The necessary operation is the removal of the fibroid and the removal of the tissues lying between the growth and the abscesses. Hence, often total extirpation of the internal genital apparatus either by vaginal hysterectomy or cœliotomy is necessary. If there be general blood infection then the suppurative fibroid at least should be removed.
3. Carcinoma of the uterus which has produced suppuration either

in the tubes or cellular tissues. Here total extirpation, either *per vaginum* or *per ventralem* is indicated.

4. Tuberculosis of any of the pelvic bones leading to a sub-peritoneal pelvic abscess. Resection of the tuberculous lesion and opening and drainage of the abscess are called for.

Hypertrophic Rhinitis and Amenorrhœa.

Dr. F. OPPENHEIMER (*Berl. Klin. Woch.*, 1892, No. 40), reports five cases of amenorrhœa which in his opinion were due to a hypertrophic condition of the turbinated bones. A connection between the nose and sexual organs was a favorite theme with the ancients. McKenzie, of Baltimore (*Amer. Jour. of Med. Sciences*, April, 1884), has written at length upon this subject. Hippocrates mentions a patient whose nasal catarrh was always made worse by sexual cohabitation. It is a popular idea that the size of a person's nose is a guide to his sexual capacity. This idea seems to date very far back for it is stated that King Heliogabalus chose for his orgies only those men who had large and prominent noses. The cases reported by the author were girls ranging from eighteen to twenty-three years of age, who, with one exception, were the pictures of robust health. The amenorrhœa had lasted from five to nine months, and in every case after the hypertrophied turbinated bones were removed menstruation reappeared.

Pruritus Vulvæ.

T. SEELIGMANN (*Berl. Klin. Woch.*, 1892, No. 43), made this the subject of a paper read before the Hamburg Obstetrical Society. Olshausen (*Centb. für Gyn.* 1891, No. 27), has recently divided this affection into two groups.

- (1) Symptomatic, in diabetes mellitus, leucorrhœa, etc.
- (2) Essential, depending upon a true neurosis.

Seeligmann does not accept this grouping but asserts that in almost every case pruritus vulvæ is dependent upon the local infection of a microscopic parasite.

Haussman and Winckel succeeded in finding the leptothrix and leptomitus in the cases of so-called diabetic vulvitis. In two cases the author succeeded in one (which is described in detail) of his attempts to cultivate colonies of microbes from particles of tissue removed from the affected part. He concludes by saying that our therapeutics in pruritus vulvæ will have to be directed towards:

- (1) Detecting every possible source of a micro-parasitic infection and removing it.
- (2) Diminishing the disposition of the external skin of the vulva to harbor parasites.
- (3) Destroying the existing germs of the parasite.

Vaginal Enucleation of Myoma of the Uterus.

R. CHOBAK (*Samm. Klin. Vorträge neue folge, No. 43, Centb. für Gyn., 1882, No. 40*) gives an extensive and exhaustive description of the indications and methods of vaginal enucleation of uterine myoma which he followed in forty-three cases, with one death from hemorrhage in an uncompleted operation in a very debilitated subject. Twenty-four cases operated on since 1888 with a mortality of % per cent. are given in tabular form at the end of the monograph. Vaginal enucleation is limited to a certain class of cases and with this limitation it is much less dangerous than all other fibroid operations, and leaves mostly the uterus and ovaries intact, so that the possibility of conception and successful gestation still obtains. Enucleation is applicable especially in myomas of the portio and cervix, growths in the body which have a tendency to grow towards the cavity, provided the uterus is movable and can be drawn down. The absolute size of the tumor and absolute dilatation of the cervical canal are not of consequence, but it is important that there should exist a certain proportion between the size of the tumor and the dilatability of the canal. A long and rigid cervix renders the operation extremely difficult, but if it is dilatable to a certain extent, the operation can be completed. As contra-indications of the operation must be mentioned multiple and subserous tumors and disease of the adnexa, also a disproportion between the size of the growth and the dilatability of the cervical canal. On the other hand, a commencing or existing suppuration offers no contra-indication. An early diagnosis of the myoma through a careful palpation of the uterus is very desirable. The operation varies considerably according to the size and seat of the growth, but accessibility to it must be gained by stretching and incising the cervix and vagina. Following the enucleation the uterus should be mopped out with antiseptics, but the attempt to remove residua of the capsule is to be avoided, for these are best left to themselves. All cavities, and afterwards that of the uterus, are to be filled with iodoform-gauze. All tears and incisions should be carefully stitched. The after-treatment is exceedingly simple. Ergot is given to contract the uterus, and

on the fourth or fifth day the gauze is removed. It is only when there is any elevation of the temperature that it is removed before this, and the uterine cavity is energetically irrigated with antiseptics. Even suppurating growths can be treated in this way, and sepsis and pyemia can be kept in the back-ground by carrying out twice daily irrigations, following each with the introduction of fresh iodoform-gauze. In the presence of severe hemorrhage or in very anæmic persons the packing is done with iodoform and tannin gauze, but care must be taken that drainage of the secretions is not interfered with.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, Jan. 3d, 1893.

GEORGE TUCKER HARRISON, M. D., President, in the chair.

Spindle-Cell Sarcoma of the Ovary; Accidental Section of Ureter; Nephrectomy.

DR. CRAGIN presented the above specimen with the following history :

Mrs. J., æt. 40, admitted to the Roosevelt Hospital, October 24th, 1892 ; has had one child, eighteen years ago ; labor difficult ; convalescence tedious ; had menorrhagia and metrorrhagia for three months following confinement. Ever since birth of child has had dragging pains in the pelvis and has suffered with leucorrhœa. Four years ago all her symptoms became worse, menorrhagia and metrorrhagia returned and she began to have pains in both inguinal regions. These pains have continued during these four years in spite of frequent local treatment, and the menorrhagia seems to be increasing. She begged that something might be done for her relief.

October 31st, 1892. Cœliotomy was performed.

On the left side a spindle-cell sarcoma, size of English walnut, was found springing from the ovary ; the tube on the left side was distended so that it strongly resembled a loop of intestine. This appendage was easily removed.

The right appendage was the seat of a chronic salpingo oöphoritis, forming a mass about the size of a lemon. This was densely adherent and was with great difficulty enucleated; it was finally freed, ligated and removed. On examining the stump, I found that the right ureter had been displaced either by the traction of inflammatory adhesions or by my efforts in enucleation and that I had ligated and cut it.

I then examined the left kidney and found it apparently of normal size. I prolonged my median incision upward and removed the right kidney; inserted a strip of gauze through the lumbar region and closed the abdominal wound. I would state that the conjugate diameter of the pelvic brim was markedly diminished and this may have had something to do with the displacement of the ureter.

The patient made a good recovery. She passed eleven ounces of urine during the following night. During the second twenty-hours, she passed thirteen ounces; during the third, twenty-one and a half ounces; during the fourth, twenty-seven ounces; and during the fifth, thirty-one ounces.

The writer admits that the proper course in these cases is to avoid an injury of the ureter and that the Trendelenburg posture greatly aids in this, but if one is unfortunate enough to meet with the accident which befell me, and the patient is in fair condition, I should like to emphasize the value of nephrectomy rather than any other disposition of the ureter.

Of course it is all important that the presence of the kidney on the opposite side be first ascertained.

DISCUSSION.

Dr. A. F. CURRIER asked if it would not have been possible to have sutured the divided ends of the ureter. It was a matter of surprise to him that this and similar accidents were not more frequent in view of the fact that the abdominal viscera are so commonly found matted together, and he believed there was much room for improvement in the technique of operations in which such accidents occur.

Dr. A. P. DUDLEY asked why the operator had not in some way inserted the cut end of the ureter into the bladder.

Dr. CRAGIN replied that the idea of suturing the ureter occurred to him at the time, but a careful examination showed that he had simply passed across a "knuckle" of the ureter, thus removing a large area longitudinally on one side and scarcely any on the other side. Under such circumstances, suturing would have caused a sharp angle and

ultimately obstruction of the ureter. The only other method was resection, and this would have involved too great shortening of the ureter. He could not connect the cut portion of the ureter with the bladder because the injury was situated too high up.

The Murphy "Button" for Intestinal Anastomosis.

Dr. C. T. ADAMS exhibited the button and demonstrated the method of its action. This button, which was devised by Dr. J. P. Murphy of Chicago, consists of two portions, a plug and a socket, both hollow, made of brass and nickel-plated. Each portion is furnished with a flange, around which the end of the gut is puckered, and then the two halves of the button are simply pressed together when a spring holds them firmly, thus establishing the continuity of the gut. The portion of gut pinched in between these two halves of the button eventually sloughs, escapes through openings in the flanges in the lumen of the gut, and is thence carried away. In the same manner also the button itself is passed through the alimentary canal, and eventually discharged through the rectum.

Peculiar Arrangements of Adhesions Attached to an Ovary and Tube.

Dr. FREEBORN presented the specimen which is one of two ovaries removed from a colored woman, aged thirty, admitted to the service of Dr. Cleveland in the Woman's Hospital.

The patient gives a history of two attacks of pelvic inflammation previous to her admission to the hospital.

The ovary is shown in longitudinal section with the attached tube ; the anterior half to which were attached shreddy adhesions being removed. On the posterior surface the adhesions take the form of a series of sacs stretching from the ovary across to the posterior surface of the tube. From the internal end of these sacs, there is a tubular prolongation, six centimeters long, ending in a rounded blind end. From the external end there is a similar but shorter prolongation, from the closed end of which springs a pedunculated cyst. From other parts of these sacs are several small tubular prolongations.

The ovary from the other side also showed adhesions of somewhat similar character, the sacs were ruptured during the removal of the organs so that they could not be distended.

Microscopical examination of these adhesions show them to be composed of fibrillar connective tissue of a loose character, contain-

ing developing and well-formed blood-vessels. No evidences of an endothelial or epithelial covering could be detected either in the interior or exterior of these sacs.

Tubercular Pyonephrosis.

Dr. FREEBORN also presented this specimen.

The specimen, the left kidney, was removed by Dr. Nicoll from a woman aged thirty, admitted to his service at the Woman's Hospital.

There is no history or evidence of general tuberculosis. She has had ten attacks of renal colic during the last three years. The urine has been cloudy for the past six months. This increases during the absence of pain and decreases during an attack of colic. Its sp. gr. is 1018 and shows volumetrically thirty per cent. of pus.

The kidney is nearly normal in shape, measuring twelve centimeters in length, six centimeters in width and seven centimeters in thickness. Longitudinal section shows the substance of the kidney riddled by a number of anastomosing cavities, which were filled with thin pus. They are lined with a slightly corrugated soft membrane.

Microscopical Examination. Nearly all of the normal kidney structure is replaced by moderately dense connective tissue, which assumes a somewhat laminated structure around the pus cavities. The capsule is thickened and infiltrated with pus. In the cortical zone a few degenerate glomeruli and convoluted tubes still remain. The lining membrane of the pus cavities consists of granulation-tissue containing numerous tubercles; the surface being covered with a layer of pus.

Carcinoma Uteri and the Various Operations for the Removal of the Uterus.

Dr. J. R. GOFFE presented three cancerous uteri, one being removed by the Freund method, the second by Kraske's sacral resection, and the third *per vaginam*, with the following histories:

I have the pleasure of presenting to the Society to-night three cancerous uteri which I have removed by three different methods during the past two years. I have selected them for presentation, more for the purpose of discussing the methods of operation than for any particular interest in the specimens themselves.

One was removed by cœliotomy, *the Freund method*, one by sacral resection, *the Kraske method*, and one *per vaginam*.

Strangely enough no two of the patients were of the same nationality; one was French, one German and one English. One, the

English woman, succumbed to the operation, the Kraske method. The other two made good recoveries and are now well.

Specimen I. The patient from whom this was removed presented herself at my class in the Polyclinic on December 15, 1890, with the following history: Nationality French, aged thirty-two, married nine years, the mother of four children. Three months ago she had a profuse hemorrhage and since then a profuse foul discharge. The uterus was large and the cervix necrosed with epitheliomatous infiltration.

I sent her to Randall's Island Hospital where I performed coeliotomy and removed the uterus by the Freund method, January 7, 1891. I chose this method on account of the size of the uterus and the impossibility of dragging it down. The point in the technique that I wish to mention is that I left the ligatures long and carried them down into the vagina. I then stitched the bladder flap to the peritoneum in Douglas' pouch and so shut out of the peritoneal cavity all raw surfaces and the open end of the vagina.

The patient made an uninterrupted recovery, the ligatures all came away in due time and she is now, two years after the operation, in perfect health.

The second specimen was removed from Mrs. B., an English woman fifty-three years of age. She gave a history of offensive vaginal discharge for one year, occasionally severe hemorrhages for six months and intense pain, constant for the past five weeks except when relieved by morphia. Examination revealed an epithelioma of the cervix reaching up into the body; the uterus retroverted and bound down to the rectum, indicating an extension of the disease to that viscus.

Pain was the predominating symptom in this case. It was so constant and severe that she begged for relief at any cost. I therefore attacked it from the back by the Kraske method with the expectation of exsecting not only the uterus but a portion of the rectum. In this I had the valuable assistance of Dr. Janvrin as well as that of the House Staff of Randall's Island Hospital. Date of operation, September 12, 1892.

The patient was placed in the Sims' posture and a slightly curved incision made from the right sacro-iliac synchondrosis to the tip of the coccyx. The coccyx was then removed by separating the sacro-coccygeal junction and dissecting it from adjacent tissue. The rectum, was thus freed from its attachment to the sacrum, and the right ala of the sacrum taken off obliquely from the third foramen to the left lower angle of the bone. This was done with bone-forceps. The peritoneum

to the right of the rectum was then penetrated and the rectum pushed to the left. The adhesion between the uterus and rectum was then severed by the fingers. This proved to be inflammatory only and not an extension of the disease from the uterus. It only remained therefore to remove the uterus. Silk ligatures were applied to the broad ligament on either side securing the ovarian and uterine arteries, and the uterus cut away. A few sutures were inserted to properly sustain the parts, and the pelvis and wound packed lightly with iodoform-gauze.

The general condition of the patient was bad throughout the entire operation, and upon being put to bed she promptly became pulseless at the wrist and threatened immediate dissolution. In anticipation of such an emergency I had had during the later steps of the operation a salt solution strained and kept warm. Of this I promptly transfused eight ounces into the median basilic vein. The effect was immediate and surprising. The color returned to her face and the pulse to her wrist. This was supplemented by hypodermics of strychnia, one-sixtieth of a grain, repeated every four hours throughout the night.

She rallied well and gave promise of final recovery, but in spite of every effort to restore the action of the kidneys there was complete suppression of urine from the first.

Careful stimulation and rectal alimentation kept her alive, however, till the fifth day when she died of exhaustion. Autopsy the following day showed an entire absence of peritonitis and any inflammatory condition at the site of the operation. The left kidney had been entirely disintegrated and nothing remained of it but a collapsed cicatrized sac. The ureter also on that side was collapsed and impervious. The right kidney was greatly enlarged, the seat of an acute parenchymatous nephritis. The ureter was patulous throughout. The specimens illustrated beautifully the relation of the ureter to the ligatures in hysterectomies, and I intended to show them to-night in connection with this report. But unfortunately the fluid in which they were placed did not preserve them properly and they are no longer presentable.

The third specimen was removed from Mrs. L., a German woman, forty-nine years of age, the mother of four children. Her predominating symptoms were offensive discharge, menorrhagia, two severe hemorrhages, and very little pain. She was a large, fleshy, full-blooded woman and gave no indication in her general appearance of the extensive ravages going on in the cervix uteri. The entire uterus was enlarged but the disease itself had only begun to invade the uterine

cavity proper, while the cauliflower growth in the cervix dilated the vagina to the extent of two-and-one-half inches, and filled almost its entire cavity. Hysterectomy was done by me at the Skin and Cancer Hospital November 1st, 1892. The cervix was first rimmed out with a sharp curette to get rid of the diseased tissue and allow of room in which to work. The patient was very fleshy and the uterus much enlarged, so that the operation was rendered unusually difficult. No attempt was made to invert the uterus. It was dragged down as near to the introitus as possible, the ligatures applied, and the tissue cut away in a steady advance to the fundus. Recovery was complicated by a vesical fistula which made itself apparent about a week after the operation, and the patient left the hospital before it had entirely healed.

In these three cases which I have selected for this report I have had the opportunity of trying all the methods available for removal of the uterus. In all I used the ligature, and preferably the silk ligature. I consider them all about equally serious for the patient and equally difficult for the operator. The Kraske method, although I had used it in exsection of the rectum for cancer in a man, seemed to me a very formidable proceeding for removal of the uterus when the vagina offered so direct a path. But Dr. Montgomery of Philadelphia has shown so conclusively its utility in complicated cases that I was induced to try it.

The removal of the tissues necessary to expose the contents of the pelvis is not difficult nor does it require much time. Moreover the tissue in this neighborhood is not very rich either in blood-vessels or in nerves, and I cannot think the procedure productive of much shock. In my case the opening allowed a good view of the contents of the pelvis and permitted me to pass my left hand directly into the pelvis, where in good view it rendered the passage and tying of the ligatures very simple. It brings one much nearer to the field of work than a coeliotomy. Although my case proved fatal, the particular features of this operation are not responsible for it. It was a desperate chance in any event and in the light of the autopsy almost necessarily fatal, although the house-surgeon reported that the previous examination of the urine gave no indication of the condition of the kidneys, except the presence of a small amount of pus.

This method has advantages and is certainly most serviceable in cases involving a large fundus, in those complicated by enlarged and adherent appendages, as well as in those in which the rectum is involved.

The technique of the Freund operation has been so much improved since its application to the removal of fibroid tumors that it no longer stands as a formidable procedure. The objection to it is the danger of infecting the peritoneum by contact with the cancerous tissue. Freund's statistics were something appalling as we view them in the light of to-day, but I believe that improved technique and thorough asepsis will give quite as good results by that method as *per vaginam*.

DISCUSSION.

Dr. G. M. EDEBOHLS asserted that the speaker was mistaken when he said that the three operations described represented all the methods of operating for the removal of cancerous uteri, for there were at least two others, viz.: perineotomy and the para-sacral incision. Perineotomy consists in a transverse incision from one tuber ischii to the other, the incision passing between the vagina and rectum. In a recent experience with this operation in one case, which he would lay before the Society at the proper time, he had been much impressed with the facility with which he could not only remove the uterus, but a small cancerous nodule lying between the rectum and vagina, and a very large infiltration into the left broad ligament. He considered this operation especially applicable to cases where there is extensive involvement of the vagina or of a narrow vagina. In the other method, the para-sacral, the incision is in such a position as to approximately cover the sacro-sciatic foramina running along side of the sacrum down to the apex of the coccyx. After making this incision, no bone is excised; it is only necessary to sever and retract soft parts.

Dr. DUDLEY asked what advantages these methods possessed over simple abdominal section. The reports were interesting, but he did not believe in advocating the employment of these operations which were necessarily more or less experimental, until we were in a position to state that they offered decided advantages over the more thoroughly understood method of abdominal section. Personally, he could see no advantages in the posterior section over a simple laparotomy. He had come to the conclusion that the easiest method was the best one, and he thought even vaginal hysterectomy would yield in time to laparotomy. Abdominal section permits of careful inspection of the pelvis and, if there be infiltration, there is no better way of dealing with it than by this operation; moreover, there is less danger of infecting the peritoneum with discharges from a cancerous uterus by an

abdominal section than by vaginal hysterectomy, where the gravitation of the cancerous material backwards into Douglas' cul-de-sac favors such a mishap.

Dr. CURRIER said that a few months ago, when this subject was under consideration in the Philadelphia Obstetrical Society, it was stated that there were but two methods practically available for most surgeons who would extirpate the uterus for cancer, and this statement was very much in line with the remarks of the preceding speaker. Those who had any experience with the Freund operation, as modified by the Trendelenburg position, realized how very different it now was from what it was originally. He believed he had assisted in the first Freund operation done in New York City. It was at least ten years ago, and he was impressed at the time with the great difficulties of the operation. The mortality of this operation was so great that its critics declared five or six years ago that the operation had never been successful. This, however, was not quite true, for ten years after Freund read his original paper, he reported that one of his first cases still survived. The difficulties of the present method of performing this operation are comparatively slight. He would not go so far as to say that abdominal section was the preferable operation in all cases, for he thought that in those cases where the uterus was entirely movable and its body small, in which there was no infiltration in the broad ligaments and no evidence of inflammatory exudation, the vaginal operation offered the best chances of success, providing the vagina was sufficiently capacious. In almost every other case, however, abdominal section with the patient in the Trendelenburg position gave advantages not possessed by any of the newer operations, and the latter, although useful in exceptional cases, as shown by the experience of Dr. Edebohl, would certainly never come into very general use. Another point of interest in connection with the case reported was the condition of the kidneys. Lancereaux stated long ago as a result of extensive studies in the dead-house on those having died of uterine cancer, that advanced carcinoma of the uterus was invariably associated with severe disease of the kidneys. The speaker said that he had himself made quite a number of *post mortem* examinations on women who had died of advanced uterine cancer and had found this statement true in every case which he had thus examined. He believed therefore that in these cases a radical operation offered but little prospect of lasting benefit, nevertheless he thought it good practice in every case of carcinoma of the uterus to remove the uterus, where this could be done.

Dr. GOFFE, in closing the discussion, said that he thought some cases indicated an approach from one channel, and some from another. In the case upon which he performed the Kraske operation there was a retroverted and adherent uterus, and he expected to have to remove a part of the rectum. He had selected this particular operation in that case because no other permits of such easy access to the entire contents of the pelvis. As it had proved neither dangerous nor tedious, he would use the method again under similar conditions. He considered all three of his cases about equally difficult, but the Kraske operation for adherent uterus, or one with extensive disease of the appendages, is the best-known method. He had never tried the incision through the perineum, and therefore could not speak definitely in regard to it; but he thought that incising the vagina on either side would give quite as much space as making an incision further back, because the tissues could be retracted.

A Very Large Braided Silk Ligature which had been in the Abdomen for Two Years without Undergoing Absorption.

Dr. ANDREW F. CURRIER presented a very large braided silk ligature with double loop, and a long wooden bristle apparently from a disinfecting brush. The specimens were removed from an abdominal sinus in a young woman who was operated upon two years ago for pelvic abscess. The sinus appeared within a short time after her recovery from the operation, and she was kept under observation in the hospital three months while efforts were made to close the sinus. Since she left the hospital the discharge from the sinus had been profuse and troublesome. She was first seen by the speaker about two weeks ago and he had proposed to make a transverse incision beginning at the opening of the sinus and extending outward to the right, which was the general direction of the sinus, far enough to enable him to get at the bottom of the sinus and then make his dissection and separation of adhesions from below upward. As a preliminary step the sinus was irrigated with peroxide of hydrogen, dilated with a Sims' dilator, and then cautiously curetted. The limiting walls of the sinus were soft and yielding and were evidently constituted by intestine. After scraping away a quantity of granulation-tissue the bristle which was shown was drawn out with the curette and then the ligature. A portion of the latter was friable but the most of it appeared firm. A statement had been made by an eminent English authority that all animal ligatures are absorbed within the body in variable periods of time not exceed-

ing two years. This specimen proved the contrary, (assuming of course that it was pure silk). Disintegration was evidently going on and under conditions of heat and moisture which were favorable to such a process. There were no evidences that absorption was likely to occur. It would seem more probable that after a long period complete disintegration might occur, with extension of the fragments through the sinus, or encapsulation.

Of course the finding of these specimens demanded a postponement of the abdominal section, and in the ten days which had elapsed since the operation the sinus had almost entirely closed.

DISCUSSION.

Dr. H. M. SIMS said that about five years ago he had had a similar case occurring in a young girl upon whom he had operated for unilocular cyst; the wound healed promptly but almost two years afterwards she returned, complaining of pain in the lower angle of the wound, and he found he was able to pass in a probe to a depth of five or six inches. He dilated this opening and pus flowed quite freely. He then curetted the fistulous opening. Feeling something rough at the bottom of the sinus, he attempted to remove it with small forceps, when a small piece of ligature came away. It was necessary to enlarge the opening with a bistoury before the entire unabsorbed ligature could be removed.

Dr. DUDLEY said that he had reported three such cases with the specimens. He attributed the non-absorption of the silk to a probable infection with septic material, as the ligatures were thrown around pus-tubes. Since this report, he had had another such specimen which had been removed from a sinus persisting at the lower end of the incision eighteen months after an operation for hysterorrhaphy. It was a salmon-gut suture which had been perfectly preserved, and which was removed from the sinus with a narrow pair of forceps. He thought a number of suture materials would not be absorbed when so infected, particularly the braided silk.

Dr. EDEBOHLS remarked that the evident moral was to use nothing but catgut.

Dr. GOFFE said that the specimen presented was nothing extraordinary, as a number of similar cases had been reported to the Society. Mr. Bland Sutton's remark about the length of time required for the absorption of an animal ligature in the abdominal cavity was true in a general way. Silkworm gut might remain encysted and harmless for a life-time but, if not infected, he thought the tendency was for all

ligatures, silk, catgut or silkworm gut to undergo absorption. As Dr. Dudley had said, the ligature had probably become infected in the placing of it, owing to the infectious nature of the tissue through which it passed, and therefore the operator is not responsible *necessarily* for the infection of such a ligature. He recalled the fact that Dr. Grandin had reported on some silkworm ligatures which he had removed from a case upon which he had operated eighteen months previously.

Double Ulceration and Perforation of the Cæcum.

Dr. H. M. SIMS presented a portion of intestine from such a case.

Miss L., aged twenty-eight, was a patient of mine four years ago. She had been bed-ridden for four years previously, suffering from hysterio-epilepsy. This was produced by cystic degeneration of both ovaries, with prolapse and adhesions of the same. On their removal she regained her health and was perfectly well and strong up to four weeks ago. She went to a dance, became overheated, and started for home while in a profuse perspiration. She ate a hearty supper and retired to bed. About 2 o'clock in the morning she was awakened by most violent pains in the right iliac region. The family physician was summoned at once, and, thinking she was suffering from neuralgia, gave her a hypodermic. Next day I was sent for and found her extremely tender to pressure, temperature 101° and pulse 130. Had been vomiting incessantly for eighteen hours. I diagnosed the case as one of intestinal obstruction and had her removed to the Hospital the following morning with a view to immediate operation. On consultation with an eminent general surgeon, who disagreed with my diagnosis, I was persuaded to try more palliative treatment, he thinking the obstruction was at the sigmoid flexure, while I thought it at the ileo-cæcal valve. Enemas of all kinds failed to give any relief. On the morning of the third day from the beginning of the attack the patient had a sudden rise of temperature to 103° and some signs of collapse. I decided to operate at once. On opening the abdomen I found a firm band of adhesions running across the ileum about two inches from the valve. On breaking this up and pulling the gut out through the incision I was not a little surprised to find fecal matter covering my fingers. On closer inspection the cæcum was found to be perforated in two places, and for two inches above and below the perforations it had an almost gangrenous appearance. The patient was so weak that I could not attempt a resection of the gut, so I sewed it into the abdominal wound. She died twelve hours after

being put to bed. I think the ulcers were due to tubercular trouble, of which her family gives a history.

Carcinoma Uteri.

Dr. SIMS also presented a cancerous uterus removed by abdominal hysterectomy.

Mrs. M., aged forty-three, consulted me last September for uterine hemorrhages. She had been curetted twice previously. I found the hemorrhage due to carcinomatous degeneration and advised total extirpation by abdominal hysterectomy. I curetted her one week previous to the operation of abdominal hysterectomy. She made a splendid recovery, and has gained ten pounds in weight. It is now nearly three months since the operation and there is no sign of any further trouble.

Ruptured Graafian Follicles Deep in the Substance of the Ovary.

Dr. BUCKMASTER presented two ovaries which had been removed by Dr. Emmet that day. The patient had suffered great pain at the periods and extirpation had been done only after all means of treatment had failed. In examining the specimen it will be noticed that there are a number of follicles which have ruptured deep in the cortex, and this may account for the dysmenorrhœa. The tunica albuginea is very thick, and in places cuts like cartilage. The patient was first seen by Dr. Emmet twenty years ago when after a few months of treatment she remained quite well until the past five years. There was a purulent discharge from the *uterus* and the tubes were enlarged but the tubal trouble is secondary to the ovarian disease.

A Case of Modern Cæsarian Section with a Unique Indication; also Report of a Porro Operation.

By Dr. C. A. VON RAMDOHR (see page 185).

DISCUSSION.

Dr. H. J. GARRIGUES has had no experience personally with a case of this kind but, as there were no foetal heart-sounds and no foetal movements, he did not see under the circumstances that any better treatment could have been adopted.

Dr. CHARLES JEWETT asked if it would not have been possible to place the patient in the knee-chest position and push the uterus out of

the pelvis, and thus restore it to its proper position. Regarding the second case, he desired to ask in the interests of nomenclature, if the classification of this operation as a Porro operation was not incorrect.

Dr. VON RAMDOHR said that he accepted Dr. Jewett's suggestion regarding the classification of the case as a Porro ; it should have been classified as a rupture of the uterus.

Induction of Labor by the Injection of Glycerine into the Uterus.

Dr. CHARLES JEWETT reported such a case. He said it was one of albuminuria of pregnancy at the eighth month with beginning nephritic symptoms, which had lasted for several weeks without much change. There were no signs of labor at the time. About two ounces of sterilized glycerine were injected high up into the uterus (between it and the membranes) shortly before noon. Labor-pains began very shortly, and before two p. m. they were quite severe ; between four and five o'clock the os internum was completely obliterated, and the cervix very dilatable. He therefore dilated the cervix digitally, and before five o'clock in the afternoon delivered a living child. The rapidity of labor was surprising and gratifying. This method certainly acts much more promptly than any of the other methods usually employed. He used a bulb syringe with a hard-rubber nozzle, to which was fitted a No. 12 (Eng.) catheter. The whole apparatus together with the glycerine was sterilized before use.

Dr. H. J. BOLDT reported a case and asked for light upon the subject from any of the members present. About six weeks ago he said he performed an abdominal section upon a young woman having gonorrhœal salpingitis, but at the end of three weeks she began to have pain in the left half of the pelvis, and when seen by him one week later there was a large intra-peritoneal exudate, the cause of which he suspected to be sexual intercourse. The husband denied this, but the speaker was at a loss to account for it in any other way. At present, the exudate extends up to the umbilicus and occupies nearly the whole pelvis. There is no point of suppuration to be detected, and the chief symptoms are pelvic pain and frequent micturition. There is also an inflammatory condition of the vulva and vagina.

Dr. EDEBOHLS asked if the uterus had been curetted at the time of operation and, receiving a negative reply, he said there was a possibility in all operative cases of this kind of the original source of infection within the uterus still remaining active even after the removal of the tubes and ovaries. We know there are other chan-

nels besides the tubes for carrying infection from the interior of the uterus to the peritoneal cavity—for instance, the lymphatics; hence the peritoneum in this case may have become infected in this way. Even if this be not the correct explanation in this particular case, he would like to insist upon the importance of curetting the uterus at the time of the abdominal operation in all such cases. Personally, he preferred to do it immediately preceding the coeliotomy. There were still other causes which might give rise to such a condition three weeks after operation. Quite recently he had operated upon a patient, curetting the uterus, operating for the radical cure of both a ventral and an inguinal hernia, removing a double hydro-salpinx, liberating and stitching forward an adherent retroverted uterus; all at the same sitting. The patient did well for three weeks, and then there was a rise of temperature; examination showed a large exudate in the pelvis on both sides of the uterus, and exploratory puncture revealed the presence of pus. The lower part of the abdominal incision was opened, half a liter of pus evacuated, and through drainage established by an opening into the vagina. The patient then made a good recovery. He believed that the symptoms in his case were due to the fact that a female physician who was present at the operation became too interested and touched the fundus of the uterus with her gloved finger before she could be stopped. He felt certain this had caused infection, with the results already stated. He had had no other case of infection, and no death from any cause for over six months past in his surgical work.

Dr. CURRIER said this most interesting question of infection after operation in gonorrhœal cases had not yet received much attention. About three months ago he had presented specimens from a case of large double pyosalpinx of gonorrhœal origin. About two months after the operation, a tumor appeared in the region of the left broad ligament, which was somewhat movable and tender and was fairly localized. He had seen her a number of times since then; the tumor is now growing smaller and more movable. At the time of operation the left horn of the uterus was infiltrated with pus. The left appendages were removed with the actual cautery, but it is possible that some infectious matter remained. Another hypothesis in such cases is that offered by Nœggerath, viz.: latent gonorrhœa. According to this author, the gonorrhœa which has become quiescent is not necessarily cured but may be aroused at any time under favorable conditions. The speaker suggested that the inflammatory phenomena of the vulva and

vagina observed in Dr. Boldt's case might have been due to the re-awakening of a latent gonorrhœa. If curetting be done previous to an operation with such conditions some infectious material may be left; if done at the time of operation it would still fail to prevent the complication observed in his own case. It is evident, therefore, that curetting does not necessarily preclude the possibility of subsequent infection.

Dr. DUDLEY asked if hot douches were given after the operation.

Dr. BOLDT replied in the negative.

Dr. DUDLEY said he asked the question because he had himself produced a similar condition to that in Dr. Boldt's case by hot douches. One of his cases of gonorrhœal salpingitis did well after operation up to the time of beginning the use of hot douches which was quickly followed by the appearance of a pelvic exudate, which was eventually absorbed.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, January 17th, 1893.

GEORGE TUCKER HARRISON, M. D., President, in the chair.

*A New Operation for Prolapse of the Anterior Wall of the Vagina
Following the Removal of the Tubes and Ovaries.*

Dr. EMMET reported a case of this kind, and described his new method of operating on these cases. (See p. 216).

DISCUSSION.

Dr. G. M. EDEBOHLS said he was particularly pleased to hear the speaker call attention to the fact that the tying of the broad ligaments in the removal of the tubes and ovaries is sometimes a cause of subsequent distress. He had seen a number of instances where various symptoms developed as a result, he thought, of tying the broad ligaments with one ligature, either using the Staffordshire knot, or the more usual method of the intertwined double ligature, thus forcibly

puckering the broad ligaments and putting an especially severe strain on their superior free edges. The relation of the broad ligament to the pelvic organs is thus disturbed, and this gives rise to various reflex disturbances. After clinical observation had taught him the significance of these symptoms, he resorted to a different method of tying. Now, he ties the broad ligament *seriatim, i. e.*, beginning at the uterine end of the tube he ties this, including about one inch of the broad ligament; then cutting away the tube he goes on tying until three or four or more ligatures have carried him across the width of the broad ligament on either side. The immediate advantage of this method is that patients do not suffer nearly so much from shock and pain in the pelvis following the operation.

THE PRESIDENT remarked that Dr. Emmet's paper undoubtedly explained the existence of many formerly obscure cases of pelvic pain occurring after such operations.

Dr. EMMET, in closing the discussion, said that in his service within the last eighteen months, he had met with no less than nine cases; one he had operated upon himself, and each of the others had been operated upon by different surgeons, so that it was not due to any peculiar method of any one individual. He believed it a common cause of subsequent unpleasant symptoms, for it allows the whole pelvic floor to sag, producing exactly the condition found in old women who have borne a large number of children. A new train of symptoms is the result, and the patients are quite as much incapacitated as they were before the removal of the appendages.

A Novel and Successful Experiment with Peroxide of Hydrogen.

Dr. J. DUNCAN EMMET reported the following case:

The case I am about to report illustrates a novel and, so far as I have been able to discover, an unique result in the treatment of suppurating wounds.

A little less than a year ago I had under my care a case of abscess of the abdominal wall along the whole length of a median incision, following a *cœliotomy*. The operation had been performed on a very stout woman in poor general health and very anæmic. After the removal of the abdominal sutures, the whole wound opened up, owing to an abscess which had formed, down to the peritoneum. This wound was sloughy and gaping, so I treated it for the first five days with repeated washings and the application of *pinus Canadensis*, gauze-dressings and adhesive plaster. At the end of the time mentioned, the sloughs

had separated, and a portion of the wound had filled at the bottom with soft, friable, granulation-tissue from which, as well as from the rest of the wound, a large amount of purulent discharge was constantly secreted.

The desire to abbreviate the pain and considerable length of time necessary to effect healing by the open method of treatment suggested to me the possibility of obtaining union by "first intention" even in this suppurating wound. I therefore put the patient under an anæsthetic and, during its administration, I washed out the wound as carefully as possible. I then poured into the hollow of the wound peroxide of hydrogen, allowed it to remain until all formation of gas-bubbles had ceased, then wiped it out, and poured in a fresh supply of the fluid. After I had repeated this operation a number of times in the course of about ten minutes, gas ceased to be generated from the cavity, and I felt that the condition of the wound, which I had endeavored to produce, had arrived. Still, with the common inconsistency of human nature, I thought I would apply the peroxide once more to make sure. I did so, and was greatly astonished to find the gas-bubbles suddenly generated anew. I repeated it again with the same result. It occurred to me then that peroxide of hydrogen does not destroy, by preference, merely morbid tissue as we have been taught, but that it decomposes the nitrogenous elements in healthy tissue as well. Acting upon this idea I then closed the wound with silver sutures as would be done in a primary incision, being careful to pass the sutures through the bottom of the wound, as thoroughly as possible. This was easy to do in the upper part where the granulation-tissue was, but extremely difficult in the lower part where the surface was merely thickened peritoneum. In fact two or three of my sutures had so slight a hold at this spot, owing to my fear of passing them into the peritoneal cavity, that I realized that my experiment could not be successful throughout the entire incision. And so it proved. At the end of a week I removed the sutures and found that the upper half of the wound had healed by "first intention." Not a drop of discharge appeared upon the gauze covering, and it was shut off from the lower half of the wound by a solid mass of healthy granulating tissue. The lower half was partly healed only, the edges gaping at two or three points but with a healthy look. The lessons taught me by this case were the true mode of action upon tissue of peroxide of hydrogen (which is certainly contrary to the accepted theory) and that this agent may be used with great and sure benefit upon many open wounds to

effect immediate and non-cicatrical healing, especially where the wound is not too deep to give a foothold for a suture at the bottom of its sulcus.

DISCUSSION.

Dr. GEORGE C. FREEBORN said that he had had no personal experience in the clinical use of peroxide of hydrogen, but he had been told that the abscesses to which oarsmen are subject when they first go into training are best treated by washing them out two or three times with a fifteen volume solution of the peroxide of hydrogen. The theory is that the pyogenic material is destroyed, leaving a perfectly healthy granulating surface which unites readily on slight pressure.

Dr. EDEBOHLS said that about one month ago he had reported to the Society a similar case where in removing a pyosalpinx by coeliotomy the abdominal wound had become infected. Ten days after the primary operation, the superficial portion of wound was reopened, and the abscess-cavity with the silkworm sutures lying bare and exposed at its bottom, was disinfected in the manner described by Dr. Duncan Emmet. The superficial tissues were then rubbed slightly raw with sublimate gauze, and brought together by a secondary suture, with the result of obtaining primary union, again burying the original silkworm-gut sutures which have remained so buried from that day, and have caused no irritation. It was not a novel experience in his practice, as he had made frequent use of the peroxide of hydrogen during the past nine months. He did not use an anæsthetic, and the procedure was so simple that a number of cases had been successfully treated by his house-surgeon.

THE PRESIDENT said he had found peroxide of hydrogen remarkably efficacious in mammary abscesses where secondary infection had taken place, and also in large gluteal abscesses, and in the excision of suppurating glands. It was the best known agent for producing an aseptic condition in wounds.

Dr. A. H. BUCKMASTER thought it could be successfully employed in a certain class of cases where no other method was available.

Dr. A. PALMER DUDLEY said he also had obtained good results with it in cleansing wounds, but he wished to warn against its use in non-puerperal septic endometritis, for he had tried it in the latter condition and had succeeded in setting up a very violent uterine colic, presumably as a result of the accumulation of gas in the uterus.

Dr. PAUL F. MUNDÉ said that at the suggestion of Dr. Wells he had used it with excellent results in septic puerperal endometritis. In

the first case in which he had tried it, within forty-eight hours the exceedingly foul discharge entirely disappeared, the temperature became normal and remained so, and the patient made an uninterrupted recovery.

Dr. BROOKS H. WELLS said that the cases just referred to were treated by injecting *very slowly* a full strength (fifteen volume) Marchand solution of peroxide of hydrogen into the uterus, using eight or ten ounces of the solution, and taking at least a half hour to give the injection. The irrigation was kept up until no more froth escaped. After each application the temperature would fall almost to normal and remain so for a number of hours, and after a few applications the septic material seemed to be entirely eliminated. In other forms of endometritis he had obtained good results, but they were only temporary.

Dr. A. M. JACOBUS said that he had found the action of peroxide of hydrogen on blood to be about the same as that on pus, and hence, if there was any bleeding of the wound in Dr. Emmet's case, that would account for the generation of gas after the wound had been made apparently aseptic. It was probable also that the phenomenon was due to the action of the peroxide of hydrogen on pocketed pus, in the deeper parts of the wound as well as on the serum and leucocytes which would naturally ooze from the inflamed and infiltrated adjacent tissues. He had used the peroxide a great deal on venereal lesions, and in suppurating glands and sinuses with most excellent results, but he had observed that oftentimes, although an apparently clean surface had been obtained and the bubbles had ceased to be evolved, a subsequent application of the peroxide of hydrogen would cause a further evolution of gas. This evidently showed the necessity for further application of the peroxide in order to neutralize and destroy septic material still remaining.

Dr. H. M. SIMS said that he could endorse all that had been said about the advantages of the peroxide of hydrogen, and he wished to cite a case in which it had effected a cure in chronic cystitis. The patient came to him about one year ago; she was about twenty-six years of age, and complained of a bladder trouble which she had had for a number of years. Micturition was frequent and caused the greatest agony, and the act was preceded by the discharge of almost pure pus. When the urine was allowed to stand for a while, the sediment of pus would occupy about one-fourth of the bottle. On exploring the bladder, he found a chronic cystitis with marked thickening of the posterior wall

of the bladder. The patient would not consent to any operative procedure for the establishment of drainage, so he tried washing out the bladder with a mixture of one part of the peroxide of hydrogen solution to two parts of water. The bladder became filled with gas on injecting this fluid, and the gas escaped freely through the double catheter, and although the bladder was distended with gas it caused the patient very little discomfort. After this, plain water was injected to remove the bubbles. This treatment was repeated the next day, and the patient said she felt more comfortable than she had done for many months before. The bladder was then washed out twice daily, never using a stronger mixture than equal parts of the peroxide of hydrogen and water, and at the end of five or six weeks the patient felt entirely well. So the treatment was concluded by washing out with a little tepid water and boracic acid for a few days more.

Dr. LE ROY BROWN said that in a case of puerperal septic endometritis which Dr. Clement Cleveland had seen with him in consultation, washing out the uterus with bichloride of mercury solution and with Labarraque's solution accomplished nothing, and as the patient had a feeble and very rapid pulse and a temperature of 104° or 105° , it was decided to wash out the uterus every four hours with a full strength solution of peroxide of hydrogen. About six ounces of the cold solution were used at a time; improvement was immediate and very marked, and the patient made an uninterrupted recovery.

Dr. J. DUNCAN EMMET, in closing the discussion, said that he wished to utter a note of warning regarding the use of peroxide of hydrogen in concealed cavities like the uterus, in view of the apparent action of peroxide of hydrogen on *healthy* tissues. It should be remembered that in his case after an interval of three or four minutes in which there was absolutely no generation of gas, another application of the solution of peroxide of hydrogen caused gas to be generated as freely as at first when the wound was full of pus.

A Case of Pyosalpinx (dextra) and Ovarian Cyst (sinistra) Simulating Ectopic Pregnancy.

Dr. A. F. CURRIER reported the following case.

The patient is an Irish woman, thirty-two years of age, married fourteen years ago, widow six years, tall, dark and well-nourished. She has had two children; the first eight years ago, the second six years ago, and no miscarriages. Her labors were very severe, the first lasting three days and followed by a long illness, in which abdominal

pain was very marked. Her menses began at seventeen, were always profuse, lasting two days. There was prolapse of the vagina, extensive fissure of the os uteri and a sensitive mass behind and to the right of the uterus. Four years ago she fell astride a chair, a portion of the chair penetrating the vagina. Bleeding from the uterus was profuse for the next four weeks and she had never felt well since the accident. She was very constipated, and when I saw her early in January had had no good movement of the bowels for three weeks. Her last regular menstrual period began December 21st, but since that time there has been three attacks of irregular hemorrhage, the last one beginning Sunday, January 8. At that time she felt something burst in her abdomen, this being followed by a flow of blood from the uterus and excruciating pain located near the median line. When I saw her on Tuesday evening the pain was still intense and the bleeding profuse. Mucous was mingled with the blood, and the pain was distinctly located at that time in the right iliac region and down the right thigh. The abdomen was so exquisitely sensitive that a careful examination was impossible, but a tumor was indistinctly perceptible in the right iliac region. The pains were compared with labor pains, and there was distressing nausea and vomiting. There was very evidently present an abdominal tumor which required removal, but whether it was associated with the appendix vermiformis, with the tube or ovary, I confess I was undecided. She was placed in bed, and the pain subsided to a certain extent, but the bleeding and discharge of mucus continued. Friday morning I had succeeded in getting her bowels abundantly moved with the aid of salines by the mouth and enemata. Her pulse was 120 and very weak, but there was no elevation of temperature. When the peritoneum was incised, the patient being in the Trendelenburg posture, a tumor as large as an apple at once came into view, apparently forming a portion of the ascending colon. It seemed as hard as an accumulation of fecal matter, and for a moment I supposed it was such, obstructing the lumen of the colon. Passing my hand into the pelvis I found there was also a tumor as large as an orange on the left of the uterus. Adhesions were abundant but they were ruptured without much difficulty. The tumor on the left proved to be a cyst of the ovary filled with bloody serum, and it was ruptured in removing it. The tumor on the right was then traced from the uterus outward. The broad ligament was greatly thickened, the veins of the pampiniform plexus enlarged, and the tumor proved to be the outer extremity of the Fallopian tube with an accumulation of pus in it and the sur-

rounding tissue; all so closely adherent to the ascending colon that it was very easy to mistake it for a portion of that viscus. Fortunately the area of attachment was discovered and a separation effected by blunt dissection without mishap. Except for a pleurisy and bronchitis of moderate intensity which followed the operation, the patient has had no difficulty since. The case is an interesting one from its resemblance in clinical features to many of the cases of ectopic gestation. This gives me an opportunity to express my decided skepticism as to the extraordinary and alarming frequency of this condition, which is suggested by many of the published reports. I have yet failed to be convinced that every effusion of blood into the pelvis signifies gestation, and over many of the cases that have been published feel like writing, at least for my own conviction, the Scotch verdict: *Not proven*. It is a strange thing that among the many cases that are reported, evidences of a foetus are found in comparatively so few.

DISCUSSION.

Dr. PAUL F. MUNDE said that he heartily agreed with what Dr. Currier had said against the claim that every effusion of blood into the pelvic cellular tissue came from the rupture of a tubal pregnancy. In no case of effusion of blood into the pelvic cellular tissue, upon which he had operated, had he found the slightest evidence that this effusion was due to the rupture of an intra-ligamentous tubal pregnancy, and he saw no reason why a blood-vessel might not rupture in the pelvic cellular tissue as well as in any other part of the body.

Dr. H. J. BOLDT did not think that any one claimed that effusions of blood into the pelvic cavity were *always* due to rupture of an ectopic gestation; the claim is that in the majority of instances in which there is such an effusion of blood, with a history pointing toward gestation, the cause of the condition is a tubal pregnancy.

Dr. E. B. CRAGIN said that a few weeks ago when he read his paper on "Hæmato-salpinx and Hæmatoma Resembling Cases of Ectopic Gestation," there was scarcely any one who seemed inclined to support his position. The statement he made then was that most of the cases of hæmato-salpinx and hæmatoma were due to ectopic gestation, but that in many of them we could not prove it, and that therefore we had no right to report the cases as instances of ectopic gestation. Of course, there are many cases with symptoms of pregnancy and evidences of effusion of blood which have not come to operation but have recovered spontaneously; these we are justified in considering

as cases of recovery from ectopic gestation. But the point he insisted upon was that the reporting of a case as an ectopic gestation from simply looking at the specimen and finding an effusion of blood, without examining and finding the foetus or the chorionic villi, was entirely unjustifiable.

Dr. FREEBORN said that he had very carefully examined all specimens of such effusions of blood which had come to him, making serial sections from one end of the tube to the other, and in not a single case had he met with any evidence on which he could found a diagnosis of ectopic pregnancy; yet in many of these cases, a clinical diagnosis of extra-uterine pregnancy had been made. Unless, therefore, after making such a thorough and systematic examination of the specimen, we find the remains of the foetus or ovum we are not justified in calling the case one of extra-uterine pregnancy.

Dr. DUDLEY said that three or four years ago he read a paper before the Alumni Association of the Woman's Hospital on varicocele in women. In some of the cases described in this paper, there were signs of extra-uterine pregnancy. He believed that pelvic congestion starts in just such a condition of the uterine blood vessels, and a constant congestion in the broad ligaments will lead to effusion, obstruction, intra-uterine disease, catarrhal conditions of the tubes, hæmatocele and hæmato-salpinx. In a short time, the tube becomes enlarged and occluded at the fimbriated extremity, and there is a leakage into the uterus from this constant congestion. This leakage he believed would produce certain symptoms of pregnancy, such as the sympathetic condition of the stomach, along with pain and tenderness, and even pain in the uterus, from the effort of Nature to relieve the congestion. Hence, he thought in the majority of cases of hæmato-salpinx and hæmatoma that come to operation, the starting point is some condition which results in a dilatation of the veins of the parts. In many cases, as a result of obstruction in the broad ligament, stones are formed, and Winkel reports ten cases in three thousand autopsies, where these stones or "phleboliths" were found.

Dr. EMMET believed that extravasation of blood in the pelvis was very common and tubal pregnancy an exceedingly rare condition. In his own practice he had seen but one single case of extra-uterine pregnancy. If he had erred in judgment and failed to discover the condition when it existed, these patients had nevertheless recovered. Strangely enough, he had seen fifteen or twenty cases of extra-uterine pregnancy in the practice of others and had made the diagnosis in these cases.

Dr. H. T. HANKS said he knew of only two conditions which would cause rupture of the tube, viz.: purulent salpingitis and tubal pregnancy. It was not remarkable that the long and tortuous veins so commonly found should be so congested as to rupture, but this is very different from the rupture of the tube.

Dr. BAKER, of Boston, being invited to participate in the discussion, said that the tendency of the age is certainly to report cases of extra-uterine pregnancy very frequently, but in looking at the causes of free blood in the peritoneal cavity, eight out of ten cases would probably be found to be due to a ruptured tube. He had seen a case of the latter kind where there was hemorrhage from the fimbriated extremity of the unruptured tube, in which the ovum was found perfect and entire. This was found post-mortem, and the cause of death was internal hemorrhage. Another cause of free blood in the peritoneal cavity was the separation, from some cause, of very vascular adhesions. It was quite another matter to speak of the causes of hæmatoma, which are quite numerous. In the great majority of cases he believed rupture of the tube was the cause of hemorrhage into the peritoneal cavity.

Dr. FREEBORN said that of late he had been much interested in examining the histological character of adhesions to tubes and ovarian cysts, and occasionally to uteri, removed post mortem which were in a state of retroflexion or retroversion. He had found these adhesions were abundantly supplied with very thin-walled blood-vessels and newly formed blood-vessels. In one instance he had found one of these thin-walled vessels ruptured, producing a microscopical hæmatocele between the layers of these adhesions. Last November, there was a discussion here regarding the breaking up of these adhesions in cases of retroflexion and retroversion. In the vast majority of cases these adhesions are exceedingly vascular, and very little stretching would be sufficient to rupture these vessels and cause hemorrhage. This point should be carefully borne in mind by clinicians when attempting to break up the adhesions in restoring to position a retroflexed or retroverted uterus.

Dr. CURRIER, in closing the discussion, said that the subject of ectopic gestation was one of the fads of the day. He had stated that he thought many supposed cases of this condition were reported without sufficient evidence. It seemed to him strange that surgeons of such vast experience as Dr. Emmet should have met with so few cases of extra-uterine pregnancy. To open the abdomen in a case with a

history of bleeding or severe abdominal pain and find a collection of blood in the pelvis or in the tube was, as Dr. Freeborn had shown, very far from proving the existence of tubal pregnancy; yet it was on just such evidence that many reports of tubal gestation were offered. We should therefore insist that the evidence in such cases should be given very carefully and in detail, as the subject was of such vast importance. High authorities had stated very recently that there was no such thing as pelvic hæmatocele, and that the symptoms usually classed under this head were evidence, *primâ facie*, of ectopic gestation. Something further should be adduced than the statement that any effusion of blood with symptoms suggestive of pregnancy was to be taken as conclusive evidence that ectopic pregnancy did exist. Congestion with dilatation of the veins in the broad ligaments was quite a common condition, and it was not improbable that it frequently gave rise to hemorrhage associated with symptoms which were commonly but erroneously referred to as ectopic gestation.

Demonstration of the Cystic Lesions of the Ovary and Fallopian Tube.

DR. GEORGE C. FREEBORN read a paper on this subject. (See page 192.)

DISCUSSION.

Dr. J. DUNCAN EMMET asked if Dr. Freeborn had found any histological evidence that parovarian cysts of the broad ligament would fill up with fluid after the fluid had been removed from the sac. This had been maintained by eminent authorities; among others, Keith.

Dr. FREEBORN replied that from a pathological standpoint he saw no reason why they should not, but such a question could be best answered by clinical experience.

Dr. MUNDÉ remarked that some years ago he had tapped an extremely large cyst of this kind, but it filled up again very rapidly and was then removed.

Dr. EMMET said that Attlee's practice was to cut out a piece from the cyst and allow the fluid to escape constantly into the peritoneal cavity; Attlee stated that the sac gradually atrophied.

On motion a vote of thanks was tendered Dr. Freeborn for the opportunity given the Society to see such a magnificent exhibit of specimens illustrating the cystic lesions of the ovary and tube.

TRANSACTIONS OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

Second Annual Meeting, held in New York, October 4th, 5th and 6th, 1892.

First Day, October 4th, Morning Session.

New Contributions of the Electrical Treatment, both Faradic and Galvanic, to the Diagnosis in Gynecology.

(Continued from February Number.)

These variations were found to be due to various physiological and pathological conditions. Thus, in many cases which he had failed to relieve by this current, after the excessive uterine sensibility had been controlled by castration, the electrical treatment could be resumed without special discomfort to the patient and with positive benefit. In our treatment we must note, (1) the operative reaction or intolerance to the current, and (2) the post-operative reaction. The latter is the more important and may last for several days. In a case which is free from inflammatory adhesions of the appendages, and in which the galvanic current of 50 to 100 milliampères is employed carefully, and with every antiseptic precaution, it is never followed by a febrile or a very painful reaction; therefore, the more the woman complains during the operation out of proportion to the strength of the current, and the more quickly the pain ceases after the treatment, the more precise is the diagnosis of hysteria. On the contrary, in every case of peri-uterine phlegmasia there is but little tolerance to the current, the post-operative reaction begins quickly, and is prolonged in proportion to the acuteness of the inflammation of the appendages. It may be stated positively that every pelvic suppuration predisposes to intense galvanic post-operative reaction.

Every galvanic application should be begun with the positive pole in the uterus, and the current at the commencement should not exceed fifty milliampères; the application should be interrupted as soon as there is manifest intolerance to the current, and should not be resumed until all post-operative reaction has subsided. If, notwithstanding these

precautions, the galvanic treatment is not tolerated, it indicates that there is some inflammatory condition present. Such treatment is not dangerous if the rules laid down are carefully followed, particularly as regards the use of the positive pole at the beginning, and the avoidance of too strong a current. Every uncomplicated ovarian cyst will tolerate high intensities of current applied as intra-uterine, and there is no post-operative reaction. Hence, we may conclude that the proper application of the galvanic current to the interior of the uterus informs us as to the condition of the appendages, the degree of inflammation and whether or not there is pus present. It enables us to avoid mistaking a subperitoneal fibroid tumor for a salpingitis and *vice versa*. Even if there be a co-existent ovarian cyst without inflammation, the same tolerance will be observed. If with a current of only twenty or thirty milliampères, the intolerance is excessive, it indicates that the uterus is attacked by a lesion not amenable to conservative gynaecology, and that galvanic treatment must be suspended. Castration will then probably be required.

DISCUSSION.

Dr. MASSEY thought this the most important paper Apostoli had written and he fully indorsed the views expressed by the author. He thought surgeons would find in this new aid to diagnosis an additional help in enabling them to avoid performing many useless operations. He was convinced, however, that moderate inflammation did not contraindicate applications to the interior of the uterus but he regarded the presence of pus in the tube without free exit as a positive contraindication to much interference with the interior of the uterus. He was convinced that both ovarian and salpingitic cases are originally uterine and the question to determine is whether the case is more uterine than ovarian and this will usually be settled by the treatment. He objected to the rigid electrodes employed by the author of the paper.

Dr. GOELET had utilized the faradic current in the vagina by the bipolar method to facilitate diagnosis, which it did by inducing a condition of anæsthesia, but had hesitated to use it in the uterus in the manner described by Apostoli because he had found such cases rather intolerant at first of intra-uterine interference, because of the co-existing endometritis. He thought, however, that treatment of the endometritis, which in many cases is responsible for the continuance of the inflammation in the tubes, would so far relieve the undue sensitiveness as to admit of the subsequent use of electricity for its relief, even in cases

which were previously supposed not to be amenable to this treatment. He thought it would be decidedly wrong for any one but a gynæcologist to adopt this test for diagnostic purposes. But he did not believe that Apostoli intended to convey the impression that every one was competent to employ it for this purpose. He could not approve of condemning every case of uterine intolerance to operative interference, and did not believe the author of the paper intended it to be so understood.

Dr. NUNN was inclined to regard uterine intolerance to electrical treatment as an idiosyncrasy and cited two cases to illustrate this point.

Dr. ROCKWELL thought that an analgesic effect of the faradic current of tension could be depended upon to remove the apparent intolerance of some of the cases to electrical treatment.

Dr. DICKSON, of Toronto, favored the use of mild currents in the beginning where stronger currents were not well tolerated.

Dr. WALKER, of Toronto, did not share Dr. Massey's unfavorable opinion of Apostoli's electrode, and expressed himself as much pleased with all of Apostoli's instruments. He spoke warmly in favor of the faradic current of tension for producing sedation in diseased conditions of the appendages.

Dr. CLEAVES, of New York, corroborated all the statements of Apostoli concerning the value of the galvanic current, and regarded uterine pain as indicating the necessity of an unusual degree of care in conducting any method of treatment.

The PRESIDENT said that he could not say from personal experience whether or not the fact that all electrical applications which caused undue pain indicated the existence of pus in the adjacent tissues, yet he always looked upon it as a danger signal.

FIRST DAY.—AFTERNOON SESSION.

A New Treatment of Prostatic Hypertrophy, by Dr. G. Betton Massey, of Philadelphia.

The author said that in order to understand the action of the current on the prostatic gland one must remember that the bulk of this organ is made up of muscular tissue, and the chief feature in the treatment consisted in the development of the constricting power of the electric current. While mild currents are useful in superficial prostaticitis, they will not answer in prostatic hypertrophy. Here, "swelling currents" should be employed, the current being increased from twenty to seventy milliamperes, but only allowed to remain at the maximum

strength for a few seconds. If the manipulations are conducted with scrupulous cleanliness and great gentleness, and the sittings repeated not oftener than every five days, the treatment will be followed only by a feeling of relief. The primary current is also used at each sitting, and the author considered it a valuable part of the treatment. He had found this same method also of service in a condition often associated with hypertrophy of the prostate, *i. e.*, a diminished contractility of the bladder. The speaker exhibited a home-made instrument which he had employed for this treatment. It consisted of a silver catheter with a large prostatic curve, which is covered with fused rubber, except just at the eye. The instrument being hollow enabled one more easily to locate the position of its beak.

DISCUSSION.

Dr. ROCKWELL had been unable to obtain satisfactory results from the electrical treatment of these cases, either by the method described, which is the ordinary application, or by a number of others which he had tried. He had had an opportunity of treating, recently, a case of marked prostatic hypertrophy, on whom supra-pubic cystotomy had been previously performed, so that there was an unusually good opportunity for observation. With an insulated needle introduced through the abdominal opening, the prostate was pierced to the depth of one-quarter of an inch, and a current of from 15 to 30 milliampères employed on several occasions, but when the current was finally increased to 50 milliampères, the treatment was interrupted by the development of an orchitis. With the subsidence of this inflammation, there was a notable decrease in the size of the prostate gland, allowing the patient to pass his urine quite freely. Afterward the needle connected with the negative pole was introduced into the prostate through the rectum.

Dr. MASSEY in closing said that his experience in this treatment was limited to two cases, both successful. In the first one, that of a man seventy-three years old, who had been unable to urinate spontaneously, the patient had recovered this power, and had not lost it a year or more later. In the second place rectal touch showed a marked diminution in the size of the gland after the treatment.

"Electric Cataphoresis and its Practical Application as a Therapeutic Measure."

DISCUSSION.

(a). Opening of the discussion by Dr. Frederick Peterson, of New York. He said that no definite scientific experiments bearing upon the medical aspect of this subject had been made previous to those which he carried out in the winter of 1888-9, at which time he was especially interested in the treatment of severe neuralgias with galvanism. His first experiments were made upon himself, then upon medical friends and patients, and since his first paper containing the details of these experiments was published other observers had abundantly confirmed his results. There is a streamy movement of the electric current from the positive to the negative pole sufficiently powerful to carry substances in solution through the skin. This is a purely physical action, and in no sense electrolytic. The solution of the drug must be placed on the anode only, and the greater the resistance of the fluids the more powerful will be the cataphoric effect of the current. There are various ways of producing the cataphoresis, one of the best being with the cataphoric electrode. This consists of a metal disk on which is a disk of blotting-paper moistened with the solution; thus, a thin film of a known quantity of fluid may be employed and the diffusion greatly accelerated.

(b). *The Physics of Cataphoresis*, by A. E. Kennelly, Esq., chief electrician of the Edison Laboratory, and Prof. E. J. Houston of Philadelphia. In the absence of Mr. Kennelly, his paper was read by Dr. Peterson.

The author dealt largely with certain physical phenomena, a knowledge of which is necessary to a proper understanding of cataphoresis. When two liquids, similar or diverse, are brought into communication by a narrow channel of insulating material, such as a glass capillary tube or a porous diaphragm, a current is produced and is usually accompanied by a flow of fluid from that which is positive to that which is negative. If the fluids in the two vessels are not on the same level, there will be the usual tendency to re-establish the equilibrium, but on passing through the electric current the effect is superposed upon whatever flow may already exist. Hence, in a study of cataphoresis these associated conditions should be eliminated. Given a definite porous septum, and a liquid in its pores, the total quantity of liquid transferred depends upon the amount of electricity transferred and the result is apparently not affected by the extent of surface of the septum, or by its thickness. The nature of the diaphragm, and of the solution employed, have much to do in determining the quantity of fluid transferred. It must be remembered, also, that the contact of two dissimilar substances gives

rise to a current between them. The author then stated various laws governing the motion of solid bodies and of fluids. The rate of transfusion will not be altered by any change in the length of the tube. The only function of the electric current in cataphoresis is to establish a gradient of potential. There is a general tendency for aqueous solutions to move from the anode to the cathode. Water when subjected to friction with glass also develops a positive potential. While not strictly true, it may be stated, as a general rule, that the transfer of a liquid is inversely proportionate to its solid contents. In conclusion, the author said that while the theory of cataphoresis seems to satisfactorily explain the facts, the measurements which have been made are all too few.

The discussion was then taken up by Professor Edwin J. Houston. He said that by the term cataphoresis is meant the introduction of drugs or medicaments into the body by means of an electric current, and this is dependent upon electric osmose, or electrical endosmose, as it is more commonly called. Cataphoresis is simply a variety of osmose, and by the term osmose is meant the unequal diffusion or admixture of liquids of different densities through the pores of a diaphragm separating the liquids from each other. Each liquid tends to mix with the other, but the flow is unequal in strength, and hence, there is a higher level produced in that liquid toward which the greater flow is directed. The endosmotic current is that current which is directed toward the higher level; the other is called the exosmotic current. The phenomena of osmosis are intimately associated with those of diffusion. Ordinary osmose appears to be unquestionably accompanied by an electric current, is passed through two liquids across a porous wall which separates them, the movement of the liquid takes place in the direction of the current, and, therefore, the electro-endosmotic current is the one which passes through the septum in the same direction as the electric current. By a similar process, called cataphoresis, fluids may be made to pass through the skin or other membrane of the human body by the action of the electric current. As the causes of osmosis are not well understood, and our knowledge of the causes of electro-osmosis is still more limited, a study of the phenomena of cataphoresis from the standpoint of the physicist must fail, unless supplemented by the studies of the physiologist and the practicing physician. The following are the author's conclusions;

1. That the effects of electro-endosmose, or cataphoresis, are more general than heretofore suspected. Thus, whenever an electric current is sent through the human body, whether for ordinary

therapeutics or for some definite cataphoric effect, there must be a true cataphoresis, for there must be produced a flow of the fluids in the body in the direction of the current. It follows, therefore, that the effect of the passage of a current must be to engorge certain parts and to deplete others, and it is possible that the therapeutic value of the current may rise mainly from such action. Its beneficial effect may, however, also be dependent upon the establishment of a more uniform condition of pressure in the various tissues, or on the transference of morbid products. This probably explains why in so many cases one electrode only is active.

2. Since cataphoric action presumably accompanies the passage of an electric current through the human body, the resistance of the various parts of the body cannot remain uniform, even while their resistance is being measured—a condition very different from that of ordinary conductors. Any change in resistance, due to cataphoric action, should be symmetrical.

3. There are two varieties of cataphoresis: (1) Normal cataphoresis, by means of which a disturbance is effected in the distribution of the constituents of the human body by the passage of any electrical current, and (2) abnormal cataphoresis, by which fluids are introduced into the human body from without by the passage of an electric current.

(c). "*Its Uses in General Medicine*," by W. J. Morton, of New York.

Dr. MORTON said that he had been in the habit of excluding chemical osmosis from the phenomena of cataphoresis, for the reason that osmosis may exist without cataphoresis, and one may even antagonize the other. There has been much confusion concerning the direction of the flow connected with cataphoresis, for solid particles, when suspended in a fluid, pass from the positive to the negative or may pass from the negative to the positive pole. Again, methyl blue goes from positive to negative pole, and eosin from negative to positive. Such facts show to a certain extent the term "anodal diffusion" is a misnomer. Regarding this subject, however, three broad statements may be made, which are well sustained by various observations. They are: (1) In a fluid or semi-fluid conductor, like the human tissues, there is a movement of the fluids from the positive to the negative pole; (2) extraneous fluids maintained in contact with the skin or mucous membrane are transported from the positive toward the negative pole, and in this manner medicinal substances may be made to penetrate the skin and enter the

tissues and the circulation ; (3) It has been demonstrated with tolerable certainty that medical substances in the tissue in a state of solution may be removed by the action of the electric current. This knowledge justifies two distinct divisions of the subject : (1) Cataphoresis, or simply fluid transportation, and (2) cataphoric medication and de-medication. It is difficult at present to say which will be the more useful in therapeutics. The author then described a number of interesting experiments on animals which had been made by G. M. Stewart, of the physiological laboratory of Owen's College, Manchester, England, and Newman and Harries of London. The gynæcologists have used currents of such density that the so-called hæmostatic or drying effect of the positive pole may well be due to the removal of fluids, and the liquifying effect of the negative pole to cataphoresis. The dense currents employed in the treatment of fibroid tumors produce contraction of the uterus and diminution of its vascular supply to the tumors, with a loss of its salts. The removal of the salts is the most important element in this treatment.

Regarding cataphoric medication, the author said he had often applied to the body an electrode moistened with a solution of iodide of potassium, and subsequently detected the presence of iodide by an examination of the urine. He had also been able by the same action of the electric current to drive particles of graphite so deeply into the hair-follicles that they would remain there for weeks. The objection to this method of medication is that the dose cannot be determined with accuracy. Dr. Peterson's method, which is the best yet devised, measured accurately the dose applied, but not the actual amount introduced into the system by the flow of the current. In this connection, it must not be forgotten that if we admit electrolysis as an element of cataphoresis it is quite possible that medicines, when introduced in this way in their nascent state, may have special efficacy.

There are two systems of introduction, (1) by the ordinary electrode, and (2) by electric baths. The writer published in the *New York Medical Journal* for April 25th, 1891, an account of a method of introducing lithium salts into rheumatic joints by a method which is termed "anæmic cataphoresis"—a method of treatment which since then has continued to yield most satisfactory results. Owing to the present confused state of electro-physics, it has been his custom to apply the dissolved medicine to both electrodes. Also with the aid of that special form of the static current, which the author had previously described under the name of "the static induced current," he had been

able to produce a cataphoric anæsthesia and to introduce into the body a great variety of medicinal substances. He also described an interesting experiment which he had made with the static machine to illustrate the transporting action of the current. If glycerine be placed on the positive pole, and the two poles brought about half an inch apart, on setting the machine in operation the glycerine will be seen to travel across from one pole to the other. This transference of the glycerine will not occur if the glycerine be placed on the negative pole.

The efficacy of electric baths has long been a much-mooted point. Owing to their very general adoption by quacks, there has arisen a very decided prejudice against them. Nevertheless, the experiments of Mr. Edison, Mr. Kennelly, and other scientific observers of repute, prove beyond a doubt that medicines can be introduced in this way through the unbroken tissues of the body. Austrian and German observers have introduced corrosive sublimate in this way, and have been able to find notable quantities of mercury in the urine for several days afterward. De-medication is not ordinarily called for, since it is probable that the natural methods of elimination are usually all sufficient, but has proved useful in the treatment of ulcers from which electroplaters sometimes suffer.

In conclusion, the author said that while admitting the foregoing statements to be facts, we are not yet in a position to give a judicial expression as to the value of these methods of treatment.

(d). *Its Uses in General Surgery.* By W. H. Walling, of Philadelphia. (Read by title).

(e). *Its Uses in Gynæcology.* By Dr. Augustin H. Goelet, of New York.

Dr. GOELET said that he considered cataphoric medication had only a very limited sphere of usefulness in gynæcology. He had experimented at one time with the positive pole in the vagina, moistened with solutions of morphia and cocaine, and had obtained fairly good results, but he had been led to abandon this line of investigation on account of the superior effects obtained with the faradic current in the way of relieving pain. A novel method of employing cataphoresis consists in moulding plaster of paris around a platinum wire, and saturating the plaster with the drug which it is desired to introduce. At present, he only employed cataphoresis for the purpose of producing anæsthesia of the vaginal surface previous to making punctures. This is really done by moistening the electrode with a four-or eight-per-cent.

solution of cocaine, and employing a current of 10 or 15 milliampères. It not only renders the puncture painless, but materially lessens the subsequent aching.

(f). *Its Uses in Nervous Diseases.* By Dr. Frederick Peterson, of New York.

Dr. PETERSON said that after vainly endeavoring in various ways to control the pain of severe supra-orbital neuralgias, he had found that the application of a galvanic current with the anode moistened with a 10 or 20 per cent. solution of cocaine, gave absolute relief for a period from four to ten hours, and without producing any constitutional effects. As this cataphoric anæsthesia does not seem to mitigate neuralgias having their origin far back of the seat of pain, it is probable, as Dr. M. A. Starr has suggested, that this method also possesses some diagnostic value. He had experimented with a great many other substances, but had found cocaine most suitable for producing anæsthesia; chloroform produced a dermatitis, and helleborin, although producing deep anæsthesia, also causes much smarting.

GENERAL DISCUSSION.

Dr. MASSEY said that he had found cataphoric anæsthesia of service, chiefly in very superficial conditions, and, therefore, it has but a very limited field of usefulness in gynæcology. The objection to this method of treating enlarged glands in the neck with iodide of potassium is that a strong current cannot be used, on account of the great irritation of the skin which it produces. Under this treatment he had found that tumors would be considerably swollen for some days after the application. He had therefore employed his favorite soap electrode with a current of sixty milliampères, and after persevering in this treatment about one month, he found the glands had diminished. He had also found the method of electric elimination very useful on one occasion, when during the removal of hairs from the face by electricity, he accidentally connected the iron needle which he was using with the positive pole, thus producing an iron stain. By reversing the current the stain was quickly removed by the metal being redeposited on the needle.

Dr. W. F. HUTCHINSON said that with the exception of a very few observers, notably Drs. Peterson and Morton, most of the members had accomplished very little with electric-cataphoresis, and he thought this was due chiefly to our confused knowledge of the physical laws governing its action.

ABSTRACTS FROM AMERICAN SOURCES.

Castration Before Marriage.—The following appeared some time ago in a contemporary: The courts of Birmingham have been occupied with a very curious affair. A Dr. Malins, having performed an exploratory laparotomy on a young lady, and having found nothing abnormal, closed the abdomen, leaving the ovaries *in situ*. The year following, still suffering, the patient addressed herself to Mr. Lawson Tait, the celebrated, who, having opened the abdomen, removed one ovary. He did not remove the other because he could not find it. The patient made complaint against Dr. Malins, accusing him of having removed an ovary without her consent, and was supported in the charge by Mr. Tait. Dr. Malins denied the accusation, saying he had removed nothing. The court was embarrassed. If the judge had been a Solomon he would have ordered the abdomen in question slit open a third time; but he was not a Solomon and was much perplexed. Happily in the meantime the young woman, who had married, became *enciente*, much to Dr. Malins' delight and to Mr. Tait's discomfiture. History saith not if Mr. Tait promised to be more reserved in the future.—*Charlotte Medical Journal*.

Grimsdale (T. B.) on Congenital Absence of the Peritoneum.—(*English Medical Press*). Grimsdale recently exhibited an interesting case of this nature before the Liverpool Medical Society. The patient was a young woman, married about eighteen months, no pregnancy, menses practically normal. From her marriage she had suffered more or less pain in the left iliac region, and a few weeks before coming under observation she fell on the stairs, striking the abdomen. Acute pain was felt at the time, but notwithstanding this she went out with her husband. Whilst out she was suddenly seized with such pain that she had to be taken home and put to bed. A short time after this she was admitted into the Hospital for Women under Dr. Grimsdale. From the time of her admission there was no pyrexia, nor was there any history of fever, but a cystic swelling as large as a foetal head was felt in the left iliac region. The patient had also slight exophthalmos and a small goitre. The abdomen was eventually opened, but no trace of peritoneum could be discovered. The intestines were, as far as could be observed, universally adherent, and had to be separated in the

direction of the cyst. This was finally reached, and about a pint of clear serous fluid evacuated. One or two smaller collections were also emptied, and all washed out and drained. The patient made an uninterrupted recovery. He believed the case to be one of congenital absence of general peritoneum, similar to some that had been described.—*Epitome of Medicine*.

The Blood in Pregnancy.—Dr. F. Zarraga has studied the blood of twenty pregnant women, using Potain's sphygmomanometer. Tension average, 19.3; highest, 27 (one case); lowest, 13 and 14 (one case each); normal, 15 (one case). To ascertain the amount of hæmoglobin, Fleischl's hæmometer was used. The average was found to be 67.2, no one reaching the normal 100. To estimate the number of red corpuscles the author used the method of Thoma and Zeiss,—solution of sodium chloride, 3 per cent. (Jaksch). Dr. M. Cordero, in 1885, examined the normal blood of Mexicans in that respect, and found an average of 4,500,000 per cubic millimetre. The author found an average of 5,111,000; below the average, three cases (the lowest, 3,200,000); above the average, seventeen (highest, 6,400,000). In order to count the white corpuscles, the author first destroyed the red corpuscles, following the example of Sappey and Jaksch. He found the average to be 7,405; the highest, 20,000; the lowest, 3,200. Dr. Cordero has found an average of 5,923. Eight of the women examined reached this average, twelve passed it; omitting the one exceptional case of 20,000, the eleven remaining gave an average of 6,205. The quantity of blood is increased, the red cells are present in greater number, and they contain less hæmoglobin, but the whole amount of hæmoglobin is not diminished.—*Gaceta médica de México*, vol. xxviii, p. 259.—*Universal Med. Journ.*

A Novel Love Potion.—The colored race furnish some very peculiar ideas on the subject of love potions and powders, but the following is one that is entirely new to us. A dark-colored damsel mixed some of her menstrual blood with the coffee of the colored gentleman she wished to influence. The explanation she gave for so doing was that it would keep him true and excited. We can readily see how the latter effect might be produced were he cognizant of the nature of the material taken.—*Cincinnati Lancet-Clinic*.

The Germ Contents of the Milk of Healthy Mothers.—Palléskee, of Neustadt (*Archiv. für pathologische Anatomie und Physiologie*, Band 130, Heft 2), has made a series of experiments in order to test the

strength of the long-standing belief that the secretion of the glands of healthy individuals is perfectly free from germs. He examined the milk from twenty-two different mothers bacteriologically, with ten positive results. As a result of his investigations, he states that in the milk of perfectly healthy mothers, micro-organisms are frequently found, perhaps in the half of all the cases. These micro-organisms belong to the cocci, and mostly to the under forms of the staphylococcus pyogenes albus. It is doubtful whether these are carried to the glands by the blood current, or wander in from outside. Large numbers of staphylococci can be present in the milk of the mammary glands without the appearance of mastitis or general illness.—*Annals of Gyn. and Obstet.*

ITEMS OF INTEREST.

Eleventh International Medical Congress.—Rome, Italy, Sept. 24th—Oct. 1st, 1893. American National Committee: W. T. Briggs, Nashville, Tenn.; H. P. Bowditch, Boston, Mass.; S. C. Busey, Washington, D.C.; C. Cushing, San Francisco, Cal.; N. S. Davis, Chicago, Ill.; Norman W. Kingsley, D.D.C., New York; Wm. Osler, Baltimore, Md.; Wm. Pepper, Philadelphia, Pa.; F. Peyre Porcher, Charleston, S.C.; Charles A. L. Reed, Cincinnati, O.; D. B. St. John Roosa, New York; Alex. J. C. Skene, Brooklyn, N.Y.; James Stewart, Montreal, Can.; A. Jacobi, 110 W. 34th Street, New York, *Chairman*.

NEW YORK, February, 1893.

In a letter dated Genoa, January 24, 1893, the Secretary-General of the Eleventh International Congress, Professor E. Maragliano, directs the undersigned Chairman of the American National Committee to request the Editors of the Medical Journals of America, to kindly give the greatest possible publicity to the preliminary programme and the regulations emanating from the Italian Central Committee, which I herewith have the honor to transmit.

In so doing I take the liberty of again drawing the attention of the Gentlemen who intend to participate in the Congress to the following: It is the earnest wish of the Central Committee to receive *applications*

at an early date. The admission fee of five dollars may be sent to the Treasurer, Professor L. Pagliani, Rome, Italy; in return the ticket of membership will be forwarded. It is requested that a visiting card, containing name and address, be sent with each application, to facilitate exact spelling. *The undersigned Chairman offers his services to whosoever will direct him to forward both application and fee.*

Attention is also directed to Article 11, of the Regulations, according to which papers must be announced at headquarters, on or before June 30th, and abstracts be received on or before the 31st of July.

Very respectfully,

A. JACOBI, Chairman.

110 West 34th Street, New York.

The Eleventh International Congress of Medicine.—Rome, Sept. 24 to October 1, 1893.—President, Prof. G. Baccelli, Rome; Treasurer, Prof. L. Pagliani, Rome; Secretary General, Prof. E. Maragliano, Genoa.

The inauguration of the Eleventh International Congress will take place the 24th of September, 1893, in the presence of H. M. the King of Italy.

The work of the Congress will begin in the nineteen sections on the morning of the 25th of September. It will be continued in accordance with the arrangements to be made and published both for the general sessions and the sections. Some of the general sessions will be devoted to scientific addresses delivered by scientists of all nations.

List of the Series.—1. Anatomy; 2. Physiology; 3. General Pathology and Pathological Anatomy; 4. Pharmacology; 5. Internal Medicine; 6. Diseases of Children; 7. Psychiatry, Neuropathology and Criminal Anthropology; 8. Surgery and Orthopedy; 9. Obstetrics and Gynæcology; 10. Laryngology; 11. Otolaryngology; 12. Ophthalmology; 13. Odontology; 14. Military Medicine and Surgery; 15. Hygiene; 16. Sanitary Engineering; 17. Dermatology and Syphilology; 18. Forensic Medicine; 19. Hydrology and Climatology.

Regulations.—1. The Eleventh International Congress of Medicine will be inaugurated in Rome, on the 24th of September, 1893, and will close on the 1st of October.

2. Any physician may become an active member of the Congress by fulfilling the conditions of membership, inscribing his name, and securing his admission ticket.

3. Scientists of other professions who, through their special studies, are interested in the labors of the Congress, may acquire the rights and assume the duties of active members, and participate in the work of the Congress, both by communications and discussions.

4. The fee for admission to the Congress is twenty-five francs, or five dollars.* It entitles to a copy of the Transactions of the Congress, which will be forwarded to the members immediately after publication.

5. The character of the Congress is strictly and exclusively scientific.

6. The work of the Congress will be divided amongst nineteen sections; every member is requested to indicate, on paying his admission fee, the section for which he desires to be inscribed.

7. The provisional committee will arrange the appointment, in the opening session, of the permanent officers. They will be a president, three vice-presidents, a number of honorary presidents and secretaries. Each section will elect, in its first meeting, its president and a certain number of honorary presidents, who shall alternately take the chair during the session. Some of the secretaries will be chosen from among the foreign members in order to facilitate the recording both of communications and of discussions in the different languages.

8. There will be daily sessions, either general or sectional. The times and numbers of the general sessions, and the business to be transacted in them will be arranged by the President of the Congress.

9. The general sessions are reserved, (a) for the consideration of the common work of the Congress and of its common interests, (b) for addresses and communications of general interest and importance.

10. The addresses in the general sessions, and in such extraordinary sessions as may be arranged, will be delivered by members chosen by the committee for the purpose.

11. Papers for and communications to the Congress must be announced on or before June 30, 1893. A brief abstract of every paper and communication, with their conclusions, must be sent to the committee on or before July 31st. All of them will be printed and distributed to the members by authority of the President. Such as arrive after that date cannot be expected to find a place on the regular order of business, and will be accepted only if time will permit.

12. The business of the sections will be arranged by their presidents, who will also determine the hours of meeting, avoiding those

* Money order or check to the Treasurer, Professor Comm. L. Pagliani, Rome, Italy.

reserved for the general sessions. Two or more sections may hold joint meetings with the consent of their presidents. There will be no vote on scientific questions.

13. Fifteen minutes are allowed for the reading of a paper or communication. In the discussion every speaker can have the floor but once, and for five minutes only. To close the discussion the author of the paper is allowed ten minutes. Additional time may be given him by the president, by special resolution of the section, if the importance of the subject under discussion appear to require it.

14. The manuscript of all addresses, papers and communications read either before a general session or a section must be handed to the secretary before the close of the meeting. A special committee on publication appointed by the president will decide which or what part of them shall be published in the Transactions of the Congress. Such members as participated in the discussions are required to hand to the secretaries their remarks, in writing.

15. The official languages of the sessions are, Italian, French, English and German. The regulations, programmes and daily bulletins will be published in the above four languages. During the meetings, however, a member may be permitted to use, for a brief remark, any other language provided some member present expresses his willingness to translate such remarks into any of the official languages.

16. The president directs the discussions according to the parliamentary rules generally obeyed in similar assemblies.

17. Persons not classified under Article 3, who are interested in the labors of a special section, may be admitted by the president of the Congress. They will receive a special ticket on paying their admission fee; will not be entitled to a copy of the Transactions; and cannot speak in the general sessions nor in any section other than that for which they were inscribed.

18. The president may invite or admit students of medicine to attend and to listen. They will be given a special admission ticket, free of charge.

General Information.

Journeys and reduction of fares.—The provisional committee has made arrangements with the different Italian and foreign railway and navigation companies, in pursuance whereof special reduced prices have been granted on the steamers and railways of this country and of the countries which the members of the Congress are to traverse.

In Italy the members of Congress will find tickets for round trips, starting from Rome; they will thereby be enabled to visit the most important cities and the various universities. In regard to this, further notice will be given.

The Ladies of the Members will be furnished ladies' tickets, which will entitle them to the reduced fares granted to the members, and to participate in the festivities connected with the Congress.

Festivities.—Besides the receptions which the kind and hospitable citizens of Rome will offer to the members, the Italian colleagues will endeavor to return to the best of their power, the kindness they experienced during their stay abroad.

On some evening yet to be decided, the members of the different sections will join at a dinner which will be given in one of the first hotels of Rome.

The Italian physicians have formed special committees to show the most hearty and kindly hospitality towards the foreign colleagues.

International Exhibition of Medicine and Hygiene.—On the occasion of the Eleventh International Medical Congress, an Exhibition of Medicine and Hygiene will be inaugurated in Rome, which will gather all that may practically interest physicians and specialists. A special committee has already insured the co-operation of all the most important manufacturers of the world.

Hotels.—All the first and second class hotels of the Italian capital will afford to the members, during their stay, all desirable comforts.

The Government of Venezuela and the Pan-American Medical Congress.—Señor P. Ezequiel Rojas, the Venezuelan Minister of Foreign Affairs has forwarded on behalf of his government through the United States *Chargé d'Affairs* at Caracas, a formal acceptance of the invitation issued pursuant to the joint resolution of the United States Congress to the various governments of the Western Hemisphere to send official delegates to the Pan-American Medical Congress. The selection of delegates has not yet been made, but the names will be forwarded at the earliest possible moment.

Dr. Henry T. Byford has been elected to the chair of Gynæcology in the College of Physicians and Surgeons, Chicago, in the place of Dr. A. Reeves Jackson, deceased.

Dr. Alice MacLean Ross (*Med. and Surg. Reporter*) says: Coffee as a beverage is an agent of considerable potency in drying up the milk of nursing women. In an institution of which I had charge recently, in which there were some thirty or so nursing women, coffee was served twice a week. Regularly upon these days the nurses in charge reported a scarcity of breast-milk, and there was frequently a necessity of resorting to artificial feeding to eke out. There is every reason why coffee should be an excellent agent in reducing the flow of milk, for caffeine is one of the best known diuretics.—*Exchange*.

ANNOUNCEMENTS.

ERRATA.

- February number. Transactions New York Obstetrical Society.
Page 169. For "general an exception" read "general adoption."
" " For "Dr. King" read "Dr. Krug."
" 170. For "light injection" read "high injection."

THE APRIL NUMBER.

In the next issue of the JOURNAL we will present to our readers in the SERIES OF EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA a *sketch* of DR. CLEMENT CLEVELAND, with an excellent portrait from a recent photograph.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

APRIL, 1893.

THE PORRO-CÆSAREAN OPERATION, TESTED BY A
TRIAL OF SIXTEEN YEARS, AND IN TWENTY-ONE
DIFFERENT COUNTRIES, UNDER TWO HUNDRED
AND TWENTY-FOUR OPERATORS.

BY ROBERT P. HARRIS, A. M., M. D.

Philadelphia.

In our general record we have stopped with the end of the year 1891, for the reason that a full table of the work of any year can only be obtained by much persevering labor, long after the period in question shall have closed. No one who has not been engaged in an honest statistical research can form any idea of the difficulties which beset the investigator in his efforts to obtain all of the cases, whether favorable or fatal. A fallacious idea is very prevalent, to the effect that statistics of capital operations cannot be relied upon, because men will report their successful cases and withhold from publication those that have terminated fatally. If we relied entirely upon published records for our facts, we should fail in both respects, because of the prevailing antipathy to reporting cases, whether successful or fatal, that is felt by men who have little or no experience as surgical writers. But there are ways of obtaining such records, through

skeleton blanks, that give very little trouble or thought to the operator, while they secure at the same time all of the points desirable in a statistical table. A personal experience of more than twenty years has taught me that some of the most creditable operations in abdominal surgery would have been entirely lost to the medical profession but for the plan of obtaining them just mentioned. I could point out many operations that have been reported only through correspondence; those who performed them being content to make them known through me, either directly or indirectly.

The Porro-Cæsarean record here presented has been produced by the coöperative labors of a number of men in different countries, but chiefly in England, Germany, Austria, Russia, Italy, and the United States. By combining reports of countries, cities, special localities, and maternities, made by residents thereof, we have been enabled to help each other in obtaining a reliable and valuable general record. Many of the cases have been taken from journals and supplemented by correspondence; and others have been secured after private notification of their having been operated upon by named obstetric surgeons. This explanation of our method of working has thus been given, because when we state that the appended tabular record can be credited and relied upon, we simply record what we have reason to believe ourselves.

We have also reason to believe, that up to this present writing there have been performed about five hundred Porro - Cæsarean sections throughout the world, to give a full tabular record of which, modelled after that of Dr. Clement Godson of London, would require about thirty-six quarto pages, of the size of those of the *British Medical Journal*. It being obviously impracticable to present so cumbersome a paper, we have adopted the analytical plan, and will show the leading features of the work in text and tables.

When Prof. Porro of Pavia in 1876 introduced his new method of *completing the Cæsarean operation* it had but one object in view, and that was to diminish the fearful rate of mortality which then prevailed under the old operation. Many other comparative advantages have been from time to time taken into consideration by operators; but the original idea was not the removal of a septic nidus, or of an organ the seat of fibroid tumors. Nor did the sterilization of the woman, or the cure of osteomalacia, enter the minds of early operators. Prof. Porro saved both mother and child, which was a great step in

advance for Italy; and his own country has been his most active follower up to the present time, as will appear in my table.

The introduction of a *conservative* method of operating, in the year 1880, which under a rigid antiseptic technique gradually developed a capacity for saving life in favorable cases, beyond what had been attained under the *exsective* plan, particularly in Germany where it originated, has had the effect to check the progress of advancement in the latter, and to largely confine its application in certain countries, as in Germany and the United States, to special cases of dystocia. There is a very decided objection in the minds of many obstetricians to adopting the method of Prof. Porro in cases where either operation may be regarded as applicable. There are conditions where the *exsective* plan is imperative, because less likely to have a fatal termination than the conservative, as in tumor cases and where there is a putrid foetus in utero giving risk of sepsis. But where the case is one simply of pelvic stenosis in a married woman, the question may reasonably be asked, why subject her to a sterilizing process, which at the best has a little higher rate of mortality? Women have in a number of instances been delivered twice with entire success under the improved Cæsarean operation, and even three sections have been endured with a like result. I have seen the same woman operated upon twice, and, as her children are both dead, see no reason why her desire for offspring should not be gratified by a third operation, should she again become pregnant. I would not even tie the Fallopian tubes in such a case. She is a little, erect American, with a small symmetrical pelvis, and has had no bone disease. But for a cicatricial cervical stenosis, the result of sloughing after her first labor, she might be delivered by symphysiotomy.

There may be a reasonable excuse for preferring to perform the Porro operation upon the illegitimately impregnated and deformed dwarfs of Italy; but that does not apply here, where nearly all of the subjects are married. We have in our country a cogent reason for preferring the improved Cæsarean operation in the fact that twelve out of twenty-eight Porro subjects up to the present time have died, against five, out of the last twenty-eight, delivered under the other method. The respective popularity of the two is shown by the fact that there were only eight Porro operations in the years 1890-1891, against twenty-seven under the improved Cæsarean section. The question has been asked, whether there is really a greater mortality from

the exsective than the conservative operation, the conditions of their respective subjects being the same; and whether the higher reported rate of death under the former is not to be attributed to selecting it in preference in more unfavorable cases. This question has been carefully looked into in certain European maternities, where the same obstetric surgeons have operated by both methods, and there can be no doubt that the Porro exsection has the greater risk, although the difference is not so very decidedly marked as it has been in this country.

Reduction in the General Death Rate. This will be best exhibited by comparing the results under the first and last hundred operations. The first hundred covered a period of nearly six years, and the losses were sixty women and twenty-six children, there being twins lost in one case; and the last hundred were performed in a little over two years, with a loss of fourteen women; but still the fetal deaths were twenty-eight. In the year 1891, one third of the children perished.

Of the fourteen women lost out of the last hundred, but two presented a favorable prognostic condition at the time of the operation; and of these, one died from septic poisoning due to mortification of the centre of the stump, and the other in five days from puerperal mania, the subject being a dwarf with a kyphotic pelvis. In nine of the fourteen women the fetus was either dead when removed, or so deeply asphyxiated that it could not be revived. Had these nine women been operated upon in time to have saved their children, no doubt some of them would have recovered; as the cause of death in nearly every one had its origin in a long labor or in futile attempts to deliver. Preëxisting disease was the cause of death in five cases. In No. 2, there was kidney disease; in No. 7, pleuro-pneumonia had existed two days before labor and caused death the day after the operation; in No. 9, it was croupous pneumonia and the woman died on the seventh day; No. 14 was already septic from a putrid fetus in utero; and No. 8 was regarded as moribund, or nearly so, when the section was made.

Fetal mortality. Twenty-eight deaths in a hundred is a very high rate and indicates too long delay in operating. Four children were fatally asphyxiated, four were destroyed in utero, three died from prolapsus of the cord, two died from premature detachment of the placenta, three were long dead and putrid, and nine have been simply entered as *stillborn*. Of the remainder, one was premature and soon died, one

breathed but died for want of care, and the third died in an hour, from hemorrhage into its abdomen.

The causes of maternal death after the Porro operation are peritonitis, septicæmia, and collapse. Death by hemorrhage is now very rare. In the early days of the operation many died from the internal treatment of the stump, as many as ten being lost out of the first eleven thus treated, and seventeen out of twenty five; but the practice in hystero-myomectomy has educated the operators how to secure much better results, so that only three died out of the second twenty-five—a reduction from sixty-eight per cent. to twelve. The well-known operators, Von Ott of St. Petersburg, Fritsch of Breslau, Zweifel, Sängner, Porro, Chrobak of Vienna and Riedinger of Brünn have all been engaged in it: Porro and Chrobak, each three times with no death.

The operators and their individual work. The sixteen years show a list of two hundred and twenty-four operators and four hundred and forty-one cases, an average of less than two each. Of these, one hundred and fifty-four operated but once with a recovery of eighty-one women. The work accomplished by these initial trials is one of great interest and shows how new beginners can profit by the successes and failures of their predecessors. The first fifty of these one hundred and fifty-four lost thirty-six women; the second fifty, twenty four women; and the third fifty, only thirteen women—a fall from seventy-two to twenty-six per cent. It is not essential to success that an obstetric surgeon shall have had a special experience, but it is essential that he shall make himself familiar with the elements that give promise of success. There are several operators in the Porro ranks who have never lost a woman from the operation. Dr. Hubert Riedinger of Brünn, Austria, commenced to operate in 1878, and at the last account had had fifteen cases and no death, except that of one child. The late Prof. August Breisky of Prague and Vienna had the same record after eight operations. Prof. Leopold of Dresden saved all of his eight women but lost three children, and Prof. Porro of Milan lost two women and one child under ten operations. If to these we add the nine operations of Prof. Ettore Truzzi of Milan and Novara with the loss of two women and one child, we make a record of fifty cases under five operators with four women, or eight per cent., and seven children, or fourteen per cent. of death.

Operators of experience, according to some writers, should have *all* their cases classed together, and the results of their work taken as an

exponent of the value of the method employed. We have no objection to testing the Porro operation in this way, but do not wish to be bound in opinion by the result. It so happens that just one hundred and fifty operations were divided among eighteen men, whose credit is from five to eighteen cases each; five had five each; two had six; one, seven; four, eight; two, nine; one, ten; one, thirteen; one, fifteen; and one, eighteen. As there were only twenty-five children lost, or sixteen and two-thirds per cent., we should naturally look for a correspondingly low rate in the women, but no, there were forty-three that died, or twenty-eight and two-thirds per cent.! We have a great deal more hope in a favorable prognosis than in any degree of skill begotten of experience. Skill is important in a good case, but it fails to convert an unfavorable into a favorable one: we of course only refer to the subjects of the operation in question. Very rarely does a man undertake to deliver a woman by the Porro-Cæsarean section who has not previously had some experience as an abdominal surgeon, and give such an operator what we would call a promising case and ten to one he will save both mother and child, particularly if the woman has not been permitted to fall into labor. Wherever possible, the operation should be determined upon beforehand, and there is no reason why, in this form of section, the woman should not be delivered a few days before the termination of her period of gestation. If her cervix should be shut closely, which is a rare condition, it can be forcibly dilated for drainage. Pent-up pus in the cervix has been credited with having produced sepsis and death in one case in Europe, so that it is well to secure an opening for drainage, especially in a primipara.

The cure of osteomalacia by the Porro exsection has become an established fact in Europe, after much careful investigation into the conditions of women who had been subjected to it. This result has led to the performance of oöphorectomy in cases of the disease in non-pregnant women. This malady is so rare in the United States, that in only one case has Porro-Cæsarean delivery been required. The subject was a Mexican 9-para, and was operated upon by Dr. Arthur E. Spohn of Corpus Christi, Texas, on November 20th 1891, after a labor of three days: both woman and child were saved. I believe this to be the proper form of operation in osteomalacic dystocia, as without it the cases ultimately end in death.

Maternity hospital service. Antiseptic preparation of patients and improvements in hygienic management of hospitals have revolutionized

their mortality reports and our faith in the propriety of recommending parturient cases to be delivered in them. We now believe in regard to some of them, that cases of operative obstetrics will do much better in them than at their own homes. And could all the subjects for Cæsarean delivery be received in them before the commencement of labor, or before any attempts to deliver are made, the mortality of children and mothers could be decidedly reduced. "Emergency cases" are the trial of hospital patience and make up a large proportion of the dead list. In Maternities, where there is a very low death-rate in the children delivered by abdominal section, we *generally* find that the women have died in small proportion. We learn by reference to our manuscript reports of the work in the University Obstetric Clinic of Leipzig, the Frauenklinik of Dresden, the Santa Caterina Maternity of Milan, and the General Hospital of Vienna, that under abdominal delivery the children's columns have very few deaths in them. The Milan Maternity is wedded to the Porro operation, as its chief is Prof. Porro himself. In the hospitals of Leipzig and Dresden named, the conservative operation is generally selected, but the exsective is also employed in certain cases; and in the Krankenhaus of Vienna both forms of operation are used with nearly the same frequency: thus, from Nov. 6 1886 to May 10 1890, inclusive, there were seventeen Porro-Cæsarean and fifteen Improved Cæsarean operations, with two deaths under the first and no death after the second; the only fœtus lost was one born alive after one hundred and ninety-three days of intra-uterine life. In all of the cases of Osteomalacia, seven, the Porro method was selected. The Conservative Cæsarean record of Leipzig, all from the University Clinic but four, covering the period from Aug. 20 1880 to June 17 1891 inclusive, gives thirty-eight operations with three deaths each of mothers and children. The Frauenklinik of Dresden up to this year by the same operation, as stated in a letter recently received from Prof. Leopold, lost four out of forty-two women. My Porro-Cæsarean record of Santa Caterina Maternity of Milan is much less favorable for the women, although there were but two children lost out of thirty-one. The report is from Dec. 16 1877 to June 8 1891, and shows nine deaths after thirty-one deliveries: out of the first ten, three; out of the second ten, three; and three out of the remaining eleven. This shows a remarkable regularity in death-rate, and therefore no progressive diminution from twenty-nine per cent., as one could wish.

The Porro-Cæsarean operation in the United States. I have

already in few words referred to the proportion of deaths in our country, but the national interest requires a more detailed account, as the adoption of the method appears to have been upon the increase of late, there having been fourteen operations since March 1st 1891 with eleven recoveries. Nearly thirteen years have passed since the first operation was performed in this country, and in eleven of these years there were only fourteen sections, or as many as in the last two. Dividing equally the twenty-eight, we find nine women and five children lost out of the first fourteen, and three women and four children out of the second. Of the twenty-eight cases of dystocia, eleven were due to obstruction of the pelvis by tumors and exostoses—and of these, six died. The causes of death in the twelve women were as follows: Cardiac embolism on twenty-sixth day, the patient having a phlegmasia dolens and sitting up in violation of orders, 1; shock and exhaustion in three cases; kidney disease, with albuminuria, 1; septic peritonitis, 1; septicaemia, 2; hemorrhage from stump on tenth day, 1; puerperal mania, 1; and heart disease, on twentieth day, the patient having exophthalmic goitre, 1. But for this last misfortune our record

Porro-Cesarean Operations of Sixteen Years.

<i>Year.</i>	<i>Operations.</i>	<i>Women Recovered.</i>	<i>Women died.</i>	<i>Children saved.</i>	<i>Children lost.</i>	<i>Pedicle treated within abdomen.</i>	<i>Treatment fatal.</i>
1876	1	1	0	1	0	..	..
1877	7	1	6	5	2	..	..
1878	15	7	8	12	4 ⁽¹⁾
1879	17	10	7	15	2	..	..
1880	33	11	22	24	9	6	5
1881	22	8	14	16	6	1	1
1882	26	11	15	21 ⁽²⁾	6	4	4
1883	22	12	10	16	6	2	0
1884	29	12	17	25	4	1	0
1885	31	20	11	26	5	1	1
1886	40	26	14	34	6	5	3
1887	27	16	11	22	5	5	2
1888	36	31	5	30 ⁽³⁾	7 ⁽³⁾	4	1
1889	40	27	13	31	8	3	0
1890	48	41	7	36	12	4	0
1891	47	40	7	31	16	14	2
16	441	274	167	345	98	50	19

(1) Twins, both lost. (2) Twins, both lived, (3) One twin lost, the other saved.

would have presented ten cases in order with no loss but that of one child. We should feel encouraged to find that our death-rate has been reduced from fifty-one and three-sevenths per cent. to seventeen and one-seventh per cent. in the past two years.

Advocates of the Porro operation as the choice of methods in abdominal delivery may be found in Italy, England and America, but their special advocacy fails when examined in the light of the facts revealed by statistical research. Although the clamp operation can be quickly terminated, the time of recovery is prolonged, the woman is made barren, she has a drawn-in abdomen, her bladder space is diminished, and she may have a hernia.

Treatment of the stump or pedicle. There can be no question but that the extra-abdominal method, by clamping and pinning, is the safer for the woman in the hands of the ordinary operator, and yet to avoid this necessity of safety has been the ambition of many operators

Porro-Casarean Record of each of 21 Countries to January 1st, 1892.

Countries.	Operations.	Women Recovered.	Women died.	Children saved.	Children lost.
Italy	154	85	69	124	31 ⁽¹⁾
Austria	95	74	21	81 ⁽²⁾	15 ⁽²⁾
Germany	78	53	25	60 ⁽³⁾	19
England	23	15	8	20	3
United States	21	10	11	13	8
France	17	6	11	12	5
Russia	15	7	8	12	3
Belgium	8	6	2	5	3
Switzerland	7	6	1	5	2
Scotland	6	2	4	5	1
Australia	3	3	0	3	0
Holland	3	2	1	1	2
Egypt	2	0	2	?	1
Ireland	2	1	1	0	2
India	1	1	0	0	1
Spain	1	0	1	0	1
Mexico	1	0	1	1	0
Japan	1	1	0	1	0
Madeira	1	1	0	1	0
Canada	1	1	0	0	1
Sweden	1	0	1	1	0
21	441	274	167	345	98

(1) Twins; both lost. (2) Twins; one lost, one saved.. (3) Twins; both saved.

from an early period. Many lives were sacrificed in vain attempts to find an intra-abdominal method that could be employed without any great degree of danger, and it has only been within a very few years that this ambition has been satisfied by the non-fatal operations of certain skillful obstetric surgeons; and this success becoming known has led to the increase in the adoption of the intra-pelvic dressing of the stump, shown in the fact that eighteen cases in the last one hundred were thus managed, fourteen of them in 1891 with only two deaths. At first, the stump was ligated and "dropped in," but this "intra-peritoneal" method proved to be so fatal, that it had to be abandoned and an extra-peritoneal dressing of the stump adopted, as in the later improvements in hysterectomy for disease. This extra-peritoneal invagination of the stump resembles somewhat the old circular amputation of an extremity, the uterine peritoneum, like the skin, being turned back before amputation and then used to cover it by careful close stitching over the severed end. Such a method can best be carried out in hospital practice, where the requisite broad ligament clamps, suturing-needles, and other appliances are at hand. It is necessarily a slow operation, but the result to the comfort of the woman after full recovery is worth striving after. Having a promising case in good hands the result in recovery may be looked for with some degree of confidence, as the past record in recent years shows a mortality in *all* cases of only twelve per cent. The mode of operation, beginning with the ligation of the uterine arteries at the sides of the cervix and ending with its exclusion from the peritoneal cavity under cover of the uterine peritoneum, is credited to Prof. Chrobak of Vienna, who has reported seventeen hysterectomies under it for disease, without a death, and who performed three Porro-Cæsarean sections in October 1891 with the same management and results. He has given it the name of the "*Retro-peritoneal*" operation, and it is known in Europe as the Chrobak method. The cervix, being open and treated antiseptically, drains into the vagina, and no septic matter can escape into the peritoneal cavity. Inversion of the cervix, turning it into the vagina through an incision, and suspending it within the lower angle of the abdominal wound, have all been tried in hysterectomies; but the Chrobak has produced much the best results and is now the favorite. In April 1892, Dr. Frascani of Pisa concluded a Porro operation by inverting the cervix, and saved both mother and child.

I must now express my obligations to Prof. Egidio Welponer of

Trieste, Austria; to Dr. Clement Godson of London; to Prof. Ettore Truzzi of Novara, Italy; to Dr. Francesco Caruso of Naples; and to numerous European and American correspondents, for valuable material furnished for the prosecution of my researches. And I particularly commend the valuable and extensive tabular records of Dr. Caruso, published in the *Annali di Ostetricia e Ginecologia* of Milan, for 1892, to any one who desires to consult the cases of the last few years in detail. Dr. Caruso is a very persevering statistical writer, and his contributions in Italian and German upon Cæsarean surgery are of great value.

329 S. Twelfth Street, February 24th, 1893.

CATHETERIZATION OF THE URETERS IN THE FEMALE.¹

BY BROOKS H. WELLS, M. D.

Lecturer on Gynæcology, New York Polyclinic; Fellow of the New York Obstetrical Society; The New York Academy of Medicine, etc.

Since the publication of Dr. Howard Kelly's admirable paper on this subject in 1888,² I have given it considerable attention and have found the manœuvre of practical value in many instances.

The fact that the ureters have been accidentally cut or ligated with fatal result by many of the most skilled gynæcological surgeons during the performance of vaginal hysterectomy, or other operation necessitating incision of the vaginal vault, and the advisability at times of resecting more or less of the vaginal tissue where operation demonstrates a possible extension of malignant disease beyond the limits reached by an ordinary vaginal hysterectomy, must appeal forcibly to every operator and show him clearly the advantage to be gained by being able to pass an instrument into these tubes and leave it there as an unerring guide to their position. In cases where it is necessary to ligate the uterine artery outside of its para-vesical and vaginal branches a catheter in the

¹Read before the New York Obstetrical Society February 7th 1893, and before the Society of the Alumni of Charity Hospital.

²Trans. Amer. Gyn. Soc., Vol. xiii., page 50.

ureter insures it against damage. A soft instrument is also a most excellent means of demonstrating the direction and position of the ureter to the student; the catheter in this instance being inserted by the instructor and gently palpated by the learner. Through examination of the urine obtained from either kidney the diagnosis has been made clear in several cases of obscure bladder or renal disease, and in one case which I will sketch in brief I was enabled by this means to decide positively against a proposed surgical measure. The patient was a woman of thirty who had had three children. After the birth of the second she had suffered from a cystitis which had become chronic. Soon after the birth of the last child she developed symptoms of pyelonephritis, as shown by pain and great tenderness over the region of the left kidney, progressive emaciation, and a large amount of pus in the urine. Her physicians concluded that surgical interference was indicated for removal or drainage of the damaged kidney and proposed an operation. The patient at this juncture came to me for an opinion. From her history and general condition I did not think any operative treatment justifiable, but I examined and found the following interesting condition: The urine from the bladder was alkaline, of low specific gravity (1.008), contained little albumin but a large amount of viscid pus. No tube casts could be found. On catheterizing the ureters, which was done by the Kelly-Pawlik method, and so obtaining a sample of urine direct from either kidney, a curious condition was revealed. The left kidney secreted one-third less urine than the right, and this urine contained approximately fifteen per cent. of pus mixed with many large, round, fatty epithelia, free fat globules, and large friable, fatty casts; it was feebly alkaline and contained a moderate amount of albumin. The urine from the right kidney was acid, watery, showed a few large granular casts and contained enough albumin to show a distinct white line when floated on nitric acid—a typical cirrhotic kidney. Of course, with this showing any surgical treatment was out of the question.

Before reviewing certain of the methods by which catheterization of the ureters may be accomplished, let me recall to your attention some necessary points in the anatomy of the region under consideration. The ureter is a tube about one mm. in diameter and twenty-eight cm. in length, of which six to seven cm. are below the pelvic brim. It enters the bladder wall very obliquely and after passing nearly an inch ends in a slightly elevated slit-like or rounded opening. These openings are about three to four cm. distant from each other and three cm. from

the urethral entrance. The ureters in the bladder wall are inclined toward each other at an average angle of sixty-five degrees, and if prolonged forward would meet about two and one-half cm. in front of a straight line passing through their points of entrance. All of these measurements represent the conditions found when the bladder is distended with five ounces of fluid, that being the amount of distention which I have found most advantageous when attempting exploration of the uterers.

It is important, before attempting to catheterize these little tubes, that one learns to locate them by palpation from the vagina and so gains a clear mental picture of their position and relations. This palpation seems at first attempts difficult and unsatisfactory, but one soon learns to appreciate the delicate resistance, like that of an empty artery, which is felt by the examining finger. Gentle sweeping motions of the finger tips over the anterior vaginal wall, about a half to three-fourths of an inch on either side of the median line in the region between the inner surface of the pubic rami and the cervix, will usually reveal them. Often they can be most distinctly felt by bimanual examination, the ureter being compressed against the resistance offered by the external hand. In other cases they are most easily carried against the pubic ramus. More rarely it is not possible to distinguish them by any method of palpation. They are best identified by tracing them carefully to their ending in the bladder wall and toward the pelvic brim. These simple directions have seemed to me more practical and useful than the more elaborate means described in some of the recent text-books, to which the reader is referred for more explicit directions.

The healthy ureter is not sensitive and is very like an empty normal artery to the touch, but when the seat of an inflammatory process it is tender, sometimes exquisitely so, harder, and often much thickened and enlarged. Palpation of the tender ureter will often produce a feeling of tenesmus and sometimes an uncontrollable impulse to empty the bladder.

The ureteral catheter, devised by Pawlik and modified by Kelly, is a rigid tube, thirty cm. long, two mm. in diameter, with probe-pointed curved end with several smooth-edged openings on its concave side. It has a handle flattened on one side by which the direction of the tip is known, and a small plug with chain for stopping the other end and preventing any flow until it has entered the ureter. I have also used a flexible silver tube of the same diameter with a terminal opening, but prefer the Kelly instrument. An ordinary small elastic catheter (No. 4

with stylet may be used under certain conditions and where it is desirable to pass the instrument high up or leave it in the ureter during an operation, the stylet being withdrawn when the tip has entered the ureter nearly to the pelvic brim.

The ureters may be catheterized in several ways :

1st. By incision of the bladder, eversion of the ureteral orifice, and passage of the instrument by sight.

2d. By touch, with a finger passed into the bladder to the ureteral orifice through the dilated urethra.

3d. By touch, the point of the catheter in the bladder being guided by a finger pressed against the anterior vaginal wall.

4th. By touch aided by sight, the catheter being passed into the bladder and its position noted by the slight elevation of the vaginal mucosa which its tip makes when pressed against the bladder wall, the patient being in the dorso-sacral position with perineum retracted.

5th. By sight, the point of the catheter being directed into the ureteral orifice by the aid of an electrically lighted cystoscope.

The first of these methods, catheterization after incision of the bladder wall, is seldom necessary or justifiable at the present time and need only be considered in connection with operations for ureteral fistulæ or other surgical measures which may in themselves necessitate an opening into the bladder cavity. A probe or the smallest elastic catheter (No. 4 F.) may be employed to demonstrate the position of the opening or divert the urine from the operative field.

The second method, that of Simon, is mainly of interest from a historical point of view and necessitating as it does anæsthesia, extreme dilation of the urethra, and the passage of the finger to determine the ureteral orifices, it should never be employed until other methods have failed.

The third and fourth methods may be considered together, as they are essentially similar. In these, the patient being in the dorso-sacral position, the bladder is first distended with a known quantity of fluid, so as to efface the wrinkles or folds of the mucosa and so render the ureteral mouths more accessible. This is best done by drawing off whatever urine may be in the bladder and then injecting five ounces of a warm boric acid (3 i. to 3 vi.) or Thiersch or normal salt solution. This is easily done by the aid of an ordinary elastic catheter to which a small glass funnel is attached. Then the ureteral catheter is passed into the bladder, its tip turned downward and outward, and the orifice of the ureter sought for, by passing the tip with *very gentle* parallel sweeps

over the surface of the mucosa until it is felt to trip at the ureteral orifice. Then by a little manipulation the catheter enters the tube and slides onward precisely, as it has been most happily expressed, "as if entering an empty space." The position of the point of the catheter may be determined during this manoeuvre in two ways: In cases where the ureter is easily felt it can be carefully palpated and its direction and approximate ending determined by the finger tip which then remains against the anterior vaginal wall as a guide during the search for the orifice, the catheter point being easily felt through the thin vesico-vaginal wall. In most cases, however, it is better to use the method first described by Pawlik, with the exception that it is not necessary to employ the genu-pectoral position. In this case, the patient being, as stated, in the dorso-sacral position, the perineum is strongly retracted with a large Sims or Simon speculum, so as to put the anterior vaginal wall upon the stretch and bring its anatomical features clearly before the eye. We then note the wrinkled longitudinal ridge corresponding to the urethra and ending at the internal meatus, the *apex*, then the transverse fold convex forward about three cm. above this which corresponds to the inter-ureteric ligament, the *base*, and lastly the diverging lateral folds which correspond to the *sides* of Lieutaud's vesical triangle, and all of which form the vaginal trigone. If we once can get this clearly before our minds and eyes the manoeuvre is pretty certain to be accomplished, for we have then to turn the tip of the catheter downward and outward, keeping its point at the junction of the base and side and make the same little parallel excursions over the mucosa to feel the trip when the point passes over the ureteral orifice. The tripping point is then found again and the point of the catheter kept there with little twisting movements until it glides into the ureter. The outer end is then depressed and the catheter passes in until its tip nearly reaches the pelvic brim. I have never had occasion to try to pass it farther than this. The fact that the catheter is in the ureter is made apparent by three factors: its position, it lying in the direction of the ureter; its comparative immobility, there being a decided resistance to any to-and-fro or lateral movement; and the very characteristic intermittent flow of the urine. After the insertion of the catheter there is often an interval of from a half-minute to a minute before any urine appears, then two to four or five drops fall, there is a cessation for a few seconds, and the flow is repeated.

In the search for the ureter by this manoeuvre it is necessary to

exercise the greatest gentleness and delicacy of touch. Any roughness or exhibition of force will surely cause the tip of the catheter to perforate the mucosa and make a false passage between that and the muscular coat. While this does not necessarily do any serious harm, it is certainly something to be avoided.

The last and most certain method of finding the ureteral opening is by sight through the intermediary of Leiter electric cystoscope. This very perfect instrument is of the diameter of a No. 21 F. (No. 14 American) sound, carries in the end of its angular beak a small incandescent electric light, and by means of a window at the bend and a system of lenses carries to the eye a brilliant enlarged picture of the portion of the bladder wall to which it is directed. Its main objection is that it is very expensive. In using it for the purpose we are considering, the ureteral catheter is first passed into the distended bladder and then the cystoscope, lubricated with a sterilized dilute mucilage of acacia or simply wet, is inserted in the manner of an ordinary sound. The light is then turned on, the ureteral orifice found, and the catheter inserted. In using the cystoscope some little confusion is apt to arise at first from the distortion of the image produced and from the difference between the apparent and the real motion of the catheter tip.

It is necessary that the bladder should be well distended and that its contents should be clear, as any marked cloudiness, as from blood or pus, shows itself in a red or whitish fog which totally obscures the view. The heat generated by the lamp is insignificant and can be neglected during the time necessary for any ordinary examination. The electric current used must be strong enough to produce the maximum of illumination and the internal lenses must be absolutely clear.

With the perineum retracted, the red glow of the light through the tissues is plainly visible in the vagina, and the shadow of the catheter can be seen. By holding the tip of the catheter against the ureteral orifice, as shown by the cystoscope, the vaginal wall is depressed and can easily be marked with iodine over this point enabling one to show the student graphically and with certainty the boundaries of the vaginal trigone and the course of the ureters.

In whatever way the ureter be catheterized, it is necessary that the area about the urethral meatus, the instruments used, and the hands that touch them should be aseptic. The metallic catheters may be easily sterilized by boiling and may be taken from a boric acid

solution when used. The cystoscope, however, cannot be treated in this way, as it is important to keep its interior dry. I have found it sufficient to rinse with hot water immediately after using and then to rub off the shaft of the instrument with a bit of sterile gauze wet with alcohol.

In quite a large number of cases where I have practiced ureteral catheterization I have never seen any serious results. In a minority of the cases there is a little soreness for a few hours, but that is all. In one instance the urine next passed was tinged with blood. I have never seen cystitis nor rise of temperature follow.

The amount of pain caused by the operation itself is very variable; in some instances scarcely any discomfort is felt; in the majority the pain is very moderate; while in a few the vesical mucosa is exquisitely sensitive.

Ureteral catheterization is, in general, most difficult in young nulliparæ where the urethra is small and firmly attached to the symphysis, and more easily accomplished in multiparæ where the tissues are looser and more movable. This is particularly marked where the attempt is made to use the cystoscope and catheter together.

While the art of ureteral catheterization should and can be mastered by every expert gynæcologist, it is a procedure which I do not think will ever be generally employed by the mass of the profession. To accomplish it with any degree of certainty or satisfaction requires a thorough knowledge of the anatomy of the parts, considerable practice, gentleness, great delicacy of touch, and patience. It is a valuable addition to our methods of exact diagnosis and in certain conditions gives information which we cannot readily obtain by any other method.

71 West Forty-fifth Street.

TWO UTERI BICORNES SEPTI.

CURETTAGE AND VENTROFIXATION OF ONE; CURETTAGE AND DRAINAGE
OF THE OTHER.

BY GEORGE M. EDEBOHLS, M. D.

Katie H., aged twenty-three, single, domestic, was admitted to St. Francis Hospital October 4, 1892. She began to menstruate at seventeen, and has been unwell regularly every four weeks since, the flow lasting three days and being accompanied by pain in the coccyx.

With the exception of a severe attack of malaria in 1882, patient was well up to five years ago. Since then she has suffered from cough, dyspnœa on exertion, pains in left lower chest anteriorly and posteriorly, cardiac palpitation, vomiting spells lasting for days at a time, nausea, gastric distress and eructations after meals, constipation, vesical irritability, pains in left groin, leucorrhœa and coccygodynia during menstruation. In addition she has lost flesh and become very weak, anæmic and nervous.

Physical examination, Oct. 11, 1892. Lungs normal. Rude systolic bruit most distinct over left ventricle and apex of heart. Spleen moderately enlarged. Right kidney movable eight centimeters in a downward direction. Left kidney cannot be palpated. Tubes and ovaries on both sides normal in size, prolapsed, non-sensitive on pressure. Left ovary very hard. Uterus enlarged in all directions, but especially the longitudinal, and retroverted in the second degree. Endometritis. Vagina, vulva, rectum and coccyx normal.

Clinical diagnosis: Insufficiency of mitral valve; movable right kidney; cirrhosis of left ovary; retroversion of uterus; endometritis.

The possibility of relief from many of her ills by surgical interference was presented to the patient. Such interference was advised against, however, on account of the condition of her heart. After considering the matter for a few days, patient demanded operation, stating that she preferred death to a continuance of her miserable condition, and that she was willing to assume any risk in the effort to regain her health.

On October 25, 1892, nephrorrhaphy, curettement, removal of the left ovary and tube, and ventrofixation of the uterus were performed at

one sitting, the time required being exactly one hour and ten minutes. Ether was the anæsthetic employed.

The nephrorrhaphy for fixation of the movable right kidney offered no unusual features. At the curettement difficulty was at first experienced in introducing the uterine catheter and curette. When the instruments finally entered, the existence of two uterine cavities became evident. The right uterus measured eight centimeters and the left six and a half centimeters in depth. A strong partition, extending antero-posteriorly and reaching from the fundus to the internal os separated the two cavities. The cervix presented nothing abnormal, except that it was a trifle large. Both uterine cavities were successively curetted and irrigated. The lower half of the septum was destroyed by the curette.

The abdomen was then opened and the retroverted double uterus examined from above. After lifting the organ out of the hollow of the pelvis it was found to be divided into two lateral halves by a linear depression, running the whole length of both the anterior and posterior surfaces and deepening into a well-marked notch as it ran over the large fundus. The right half was slightly the larger and fully equal in size to a normal single uterus. Each half of the uterus had one tube and ovary. The left ovary was small, fibrous in consistence, studded with calcareous nodules and plates, and was removed. The right appendages, being found perfectly normal, were not disturbed.

The larger and more bulging right uterus was fastened to the anterior abdominal wall by three buried silkworm sutures, embracing peritoneum, muscle and fascia.

Patient made a perfectly uneventful recovery, and left her bed on the eighteenth and hospital on the twenty-fifth day after operation, both wounds healing by primary union.

The etiology of the condition here found, the uterus bicornis septus,, dates back to the third month of foetal life, development being arrested before complete coalescence of the two Müller's ducts, and before complete disappearance of the line of fusion. The anterior and posterior furrows, and the fundal notch on the exterior of the uterus, and the persistent septum in its interior, permit of no other interpretation.

Uteri bicornes septi are not so rare as is generally supposed. The number of unrecognized cases is probably quite large, since the condition is likely to escape detection until either an intra-uterine encheiresis or a cœliotomy, or both, as in this instance, reveal it.

As far as the writer's knowledge goes, this is the first recorded instance of combined curettement and ventrofixation of a double uterus.

The patient was presented at a meeting of the Section on Obstetrics and Gynæcology, New York Academy of Medicine, on Nov. 25th, just one month after operation, and examined by a number of gentlemen present. A majority of her numerous previous symptoms had already disappeared.

The second patient was presented at a meeting of the same Section held February 23, 1893.

Whereas in the first case the existence of a double uterus was only accidentally discovered at operation, in the second case the diagnosis was made by the bimanual touch and confirmed by intra-uterine palpation.

M. M., aged twenty-six, married. Family history good. Mother had fourteen children and two or three miscarriages. Patient herself has never been ill in her life.

Menstruation began at fourteen and has been regular and painless ever since, four days every four weeks. Her only child was born in August, 1892. A few months afterwards menstruation reappeared.

Last regular menstruation January 1, 1893. Miscarriage on February 12; the foetus, according to patient's description of it, must have been eight to ten weeks old.

The abortion was followed by free bleeding, fever and mild sepsis, all of which continued until I first saw her on February 18, 1893; on which day the patient was etherized for the purpose of emptying and cleansing the uterus by curettage and antiseptic irrigation.

On examination in narcosis previous to operation, what was, on first impression, the subinvolted uterus was found deflected slightly to the right, with a hard globular tumor, 7 to 8 centimeters in diameter, broadly attached to its left border from a little below the fundus to the region of the internal os.

On palpation of the normal-sized ovaries and tubes, and on carefully tracing the latter, each of the tubes was found entering the outer upper portion of the mass on its own side of the pelvis. The diagnosis of double uterus was thus established.

The quite patulous cervix was dilated sufficiently to admit the index finger and a thorough digital exploration of the uterine cavity was undertaken. A strong antero-posterior septum, extending from the fundus above to very near the internal os, a distance of five

centimeters, divided the uterine cavity into two fairly equal halves. The septum was thick and fleshy at its attachment to the fundus above, from which it gradually tapered down to terminate in a tense, falciform, antero-posterior ridge near the internal os.

The right half of the double uterus was elongated in form, resembling the normal single uterus in shape, and measured twelve and a half centimeters from external os to fundus. The left half was more globular, measured eleven and a half centimeters from os externum to fundus, and had evidently been the home of the foetus. Its cavity was everywhere lined with placental remains which extended across the ridge for a small distance into the right cavity.

This case was then, like the first, one of *uterus bicornis septus*, with a pregnancy of the left horn.

Both halves of the uterus were curetted, washed with 1-2000 sublimate solution, and each half drained with its own strip of gauze leading together out of the common cervix.

Patient made an unevenful convalescence and was discharged three days later.

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PRACTICAL OBSERVATIONS ON ABDOMINAL SURGERY.¹

BY W. GILL WYLIE, M. D.

It has been and is still a prevailing belief that the best time for doing important surgical operations is during cold, or at least cool, weather. It is still the common practice to put off major operations during the summer until the fall or winter. Many of us can recall the time when after all arrangements for an operation had been made it was put off on account of an easterly wind, and when so-called epidemics of puerperal fever were supposed to be due to atmospheric influences, and when this argument was seriously brought forward in discussions as a cause or explanation of high death-rate in the lying-in wards.

The basis of this belief was due to the fact that, during the months of January, February and March, especially during February and March, when storms and easterly winds are likely to prevail, the death-

¹Read before The New York Obstetrical Society, February 21st, 1893

rate from puerperal fever was as a rule much greater than at any other season. Had the words and writings of Semelweis been heeded, we would not have waited for the practical and persistent work of Pasteur and Lister to teach us the absurdity of such ideas. Until the divine light of cleanliness, personal cleanliness, was made clear and practical we could not see the beam in our eyes nor believe in the moths we carried about on our hands, sponges, instruments, clothes, etc., and realize that we doctors and nurses caused ninety-nine out of a hundred of all deaths by puerperal fever. For the past ten years a large part of my time has been spent in practical work in abdominal surgery. During the past six years, with the exception of one or at most two weeks out of each year, I have averaged about three laparotomies every week, operating summer and winter, as the cases came, without any regard to the weather. Many times I have operated when the thermometer in the shade stood over 90° , and one day I did two cases at Bellevue when it marked 95° . I soon found that operating in summer did not increase my death-rate, and I was so fortunate that in Bellevue it is between five and ten per cent., and in my private hospital between two and five per cent. But I never succeeded in getting through with a year's work without losing two or three cases from sepsis. As time went on I found that none of these septic cases occurred in summer, but, with few exceptions, were confined to February and March.

For the past four years from about April 15th to November 15th, although doing in that time each year from forty to sixty cases of laparotomy, I have lost only two or three cases from all causes, including cancer, but not more than one from sepsis. As I never refuse a case where an operation is the only chance of cure or prolonging life, on account of the difficulties or danger of the operation, there has been no marked difference between summer and winter cases. For several years I have decided that the best time for doing surgical operations is during the summer or when the weather is warm enough to have the windows open and when doctors, nurses and patients have cleaner clothes on than during the later months of winter and early spring. Besides, in summer our hands are not chapped and our trousers pockets are cleaner and all of us keep our persons cleaner. It may be the patients' general condition is better and the blood purer when they live more in the open air and are less susceptible to, or the system can better defend itself against, septic influence.

Of course want of care or faulty methods of operating will cause sepsis at any season, but when sepsis is more prevalent, greater care is

needed to avoid it. This is why in the past and even to-day, now and then, we hear of an operator who has had bad luck and lost three or even four successive cases. I confess that one case of sepsis in my own practice makes me so uneasy that I avoid all cases of abdominal surgery for several days at least, and change my clothes and clean up in all directions.

I have been so much impressed by the increased danger of sepsis in March especially, that I now defer during that month, if practical, any case of importance until after April 15th.

It is plain to me that the old idea that cold weather was the best time to do operations and that hot weather is bad for operations must be reversed, if we are to place success in curing patients before the personal comforts of the surgeon. Surgeons would do well to take their vacations in March.

In local or general peritonitis what should be the indication for opening the abdomen? I suppose no one here would oppose the statement that in a general peritonitis the indication for operating is when life is threatened. My own opinion is that in almost all cases where general peritonitis can be diagnosed, the indications for operating are present and the sooner it is done the better. When this opinion becomes the prevailing one among the profession, peritonitis will no longer be the dreaded disease it is to-day, for we can save at least four cases out of five even to-day, although as a rule we are not allowed to operate until impending death compels the attending physician to call in a surgeon and remove for the time the old, old dread of the knife. Surgeons were once all barbers, and to-day in some countries they are not yet called doctors.

In local peritonitis, where the danger of death is not so great, I admit the indications for operating are not always so urgent, and the diagnosis is much more difficult. Still I am sure that most cases are made more dangerous and many lives are lost by useless delay. If I were asked to name the indication which makes it plain that the abdomen should be opened in cases of local peritonitis I would say, as I have many times before, that it is best to operate in a case of local peritonitis as soon as a diagnosis of the formation of pus or purulent matter within the peritoneum is made.

In all cases where we have objective symptoms of the formation of pus in the pelvis or abdomen, together with the history of a chill or chilly sensations and fever, together with a septic pulse and appearance

that cannot be otherwise accounted for, the sooner the belly is opened by a competent surgeon the better for the patient. Delay may not result in death, but in most cases it lessens the chance of a successful cure, for the longer the inflammation lasts the more likely the peritonitis is to change from a local to a general inflammation, and the oftener the repeated attacks of inflammation occur, the more likely are the adhesions to be found dense and strong and the operation more difficult. The pus may ulcerate through and escape by the rectum or by the vagina instead of breaking into the general peritoneal cavity and causing death, and the patient may for a time seem better, have hopes for a while of escaping an operation, but we know now how few do get really well and that almost all gradually lose health and strength. When all other methods have failed they come to us to be cured, and even in this delapidated condition we can operate and not lose more than two or three in one hundred by death; but we can not make up for the long drain on the strength and health caused by this dangerous and useless delay and worse than useless local treatment. We may have removed all diseased tissue and may stop the cause, but we can't expect to make the patient over new and well in all respects by operating; yet for failing to make perfect cures in just such cases we are often blamed.

Several years ago I hesitated to operate during an acute attack of peritonitis and followed the almost universal practice of waiting till the acute symptoms had disappeared and the patient was better. Gradually I learned that this was a mistake and only waited to be sure that the case was bad enough to require an operation. Now I know that the worse the case the more necessity there is to operate during the first decided symptoms of the formation of pus or sepsis. The sooner the operation is done the easier it is, and, more important still, the sooner the operation is done the better the patient stands the operation, not merely because the adhesions are easier to separate but because the system has not been weakened by the prolonged or repeated doses of septic matter and the danger of shock is less. The system is much better able to defend itself the sooner the poison is removed. The old idea that by opening the belly you would spread the inflammation and make a local acute peritonitis general and cause death is based on the same false idea as the old method of waiting till the abscess pointed. One must open the belly in a number of cases of acute peritonitis when the temperature is one hundred and four and over and see how soon after the operation the pulse and temperature drop to

normal, if he remove the disease tissues and wash out the peritoneal cavity with plenty of hot water.

Several years ago some of my friends, who then confined their work to what is called general surgery, laughed at me when I said that local or general peritonitis, whether caused by a ruptured Fallopian tube or pelvic abscess, or by rupture of the abscess about the appendix or perforated cœcum, should be treated alike by prompt abdominal section. I claimed that it was wrong to wait till the bag of pus about the appendix could be plainly made out and then merely opened and drained, that where there were symptoms of intestinal obstruction or where there was general peritonitis from rupture the thing to do was to open the abdomen freely, break up all adhesions and wash out the cavity and, if necessary, sew up an open and floating gut. Since then I have operated upon eight cases of general peritonitis caused by rupture of the gut or escape of pus about the appendix into the general peritoneal cavity; seven of these are living to-day and three of them had a temperature of one hundred and four or over with complete obstruction of the bowels, and two had vomiting of fecal matter.

Delay, as a rule, in operating in cases of general peritonitis is wrong, and to base delay on the ground that a certain number will get well without operation is to sacrifice many lives.

There are conditions which make it justifiable and safer to delay opening the general cavity of the peritoneum to cure a local peritonitis, and of these I would always place first those where the diagnosis is doubtful. In those cases where opening the belly has been delayed until the patient's system is saturated with septic material, laparotomy may hasten death by shock. If practical and safe, we should reach the abscess or septic fluid by an opening in the vagina or in the groin or side where the septic cavity is adherent, thus enabling us to drain off the pus and relieve the system of the acute septic infection. This should be done only in those cases where we feel pretty sure that laparotomy would hasten death and where the pus can be readily reached without much risk of injuring an important organ, for it is at best merely a palliative measure and rarely results in a real cure of the disease causing the local peritonitis. In most of these cases later laparotomy for complete removal must be done to cure.

The effects of prolonged or repeated septic fever, especially when complicated by anæmia, on the power of the patient to stand a formidable operation is so bad, that in such cases I delay operating until I am convinced that by other means, such as rest, food and stopping

hemorrhage, etc., the patient's general condition cannot be improved. If such cases do not die from shock soon after the operation, they may die from exhaustion in a few days or by a late sepsis, the result of complete failure at repair or very imperfect healing of the tissues wounded.

Severe or prolonged anæmia from hemorrhage has much the same influence and makes laparotomy more dangerous.

The morphine habit soon gets patients into such a state that formidable operations are more dangerous, especially where the abdomen is opened and adhesions are broken up, for it is next to impossible to give the right dose of morphine to sustain the patient and at the same time to move the bowels and prevent complete intestinal obstruction.

For many years past I have made it a rule to cure any habit of morphine or use of stimulant before resorting to abdominal section, unless immediate operation to save life was evidently indicated.

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THE RELATION IN THE MALE AND FEMALE OF GENITAL DISEASES TO MENTAL AND NERVOUS AFFECTIONS.

BY LANDON CARTER GRAY, M. D.

It may not be generally known that the doctrine of reflex disorders dates back even four hundred and sixty years before Christ, to the time of Hippocrates, who believed that the causes of insanity lay in the four cardinal fluids, the blood, the mucus, and the black and yellow gall; or that it was Galen, one hundred and sixty years after Christ, who pointed out that there were primary insanities due to intrinsic diseases of the cerebrum, and secondary or reflex ones, from an irritation of non-nervous organs. A thought never dies, and this conception of the ancient authors probably influenced the unconscious cerebration of ages; but it was not until 1833 that the subject was taken up in tangible discussions by Mr. Stanley in his celebrated paper upon urinary paraplegia. (1) He had collected a number of instances in which disease of the kidneys or urethra had been accompanied or followed by paralysis and other grave nervous disorders. Mr. Stanley had a host of followers, many of them of the highest distinction, such as Rayer in France, Henoch and Romberg in Germany, Holland and

Graves in Great Britain, Notta, Leroy d'Etiolles, Esnault, Landry, and Macario. (2) These writers cited a number of instances of paralysis seemingly caused by genito-urinary intestinal affections, worms, even pleuritic and pulmonary affections; and Comhaire claimed that the removal of a kidney from a dog caused paralysis on the same side. (3) In 1856, twenty-three years after the publication of Stanley's paper, and again in 1861, Sir William Gull demonstrated that his cases were utterly worthless as proofs of reflex paralysis, that marked lesions of the cord might exist without being apparent to the eye unarmed with a microscope, that and several of the cases did present some evidence of gross disease of the cord or its membranes. One instance is related in which gonorrhœa and syphilis were followed by paraplegia terminating fatally, when the cord was found to have undergone a "fatty degeneration" below the sixth dorsal vertebra. (4) Gull in his turn had followers, such as Jaccoud in France, and Hasse, Romberg, and Valentiner in Germany. Leroy d'Etiolles extirpated the kidneys of dogs without producing paralysis, thus flatly contradicting Comhaire. Kussmaul made an autopsy upon a man who had become paraplegic during chronic cystitis and found atheromatous degeneration of the hypogastric arteries and fatty transformation of most of the nerve tubules of both sciatics. Leyden reported two interesting cases of paralysis seemingly caused by vesical disease in one also accompanied by long-standing urethral strictures, in which the cord was intensely softened to a large extent, there being also foci of disease in the cerebrum. In 1886 Weir Mitchell demonstrated that it was very probable that the genito-urinary lesions in most of these cases were the result or accompaniment of spinal disease instead of being the cause. Nevertheless Brown-Séquard, as late as 1873, revamps all the old histories and makes a gallant attempt at the resurrection of all the old doctrines. In 1870, and again in 1875, Dr. Louis A. Sayre of New York claims that phimosis, adherent prepuce and irritable clitoris are frequent causes of paralysis in children, of retention of urine, and of many slighter disorders. In 1872 I. Baker Brown of London was expelled from the London Obstetrical Society (after a trial in the former) because of the furious opposition aroused by his practice, based upon the value, as he claimed, of clitoridectomy for the relief of epilepsy, hysteria, catalepsy, etc. Dr. F. Otis, Mr. Thomas Bryant, and Barwell have partaken of the same enthusiastic views. Of late years, we all know the run that oöphorectomy has had for the relief of almost every nervous symptom in the female, as well as of the Grotto-

of-Lourdes-like effects that have been claimed as resulting from the correction of errors of refraction and insufficiency of the ocular muscles. Even in Madrid, the home of *chateaux d'Espagne*, the idea has taken lodgment, and Rubio and Rodriquez have attempted to show that they can abolish suicidal impulses by cutting off the uvula!

After this cursory review of the history of the subject I am tempted to reproduce what I wrote about it eleven years ago:

"We are apt to forget how easy it is to start a fashion in medicine. Let any one—if he be of eminence, so much the better—advance a new opinion, in support of which he shall cite cases that contain sufficient truth to give them an air of value at first sight, then let him make some earnest and competent assertions of opinion, he who deludes himself carrying, of course, infinitely more conviction than he who merely deludes others—and the thing is done. The journals, hungering for novelty, circulate the news. The profession itself, I am tempted to say almost in proportion as it is intelligent and studious, has a strong tendency to mistake novelty for progress. From hospitals and clinics come manifold seeming confirmations. It may even happen that the original writer is outdone, and lengths are easily reached that were far beyond his vision. A warning voice may here and there be raised, but it must be authority to create more than an echo, and even then it may fail to effect its purpose. So the discovery advances on a royal road, swelling with the bulk of success at every step. It is difficult to stay it. It is always difficult to dislodge an idea from the aggregate mind of a mass of men, especially of professional men; but when it has stolen in under the guise of science or art, it is likely to be guarded with a particularly jealous care. Being in possession, it holds on with the tentacles of mental habit; many observations have been adduced in proof of it; the refutations come late and are few in number as compared with the confirmations; the confirmations have perhaps taken possession of a thousand minds, whilst the refutations may make an uncertain impression upon a hundred; many who have publicly announced their belief keep secret the lack of faith that may have come to them; there are few who possess the habit of mind that would lead them to critically weigh the evidence, and fewer still who will trouble themselves to do this weighing. So Error, fleet-footed, speeds its way, while Truth comes tardily after, if it come at all." (5).

The truth about all this matter seems to be that, while genital irritations in the male and female have never yet been shown to be primary causes of nervous or mental disease, it would yet undoubtedly

appear that occasionally they do act as an exciting cause in an individual already predisposed, and I believe that they may frequently be an aggravating factor. It is undoubtedly the fact that certain vague nervous symptoms, which it is impossible to classify under any one type of disease, may result from such a cause. It is also unquestionable that migraine can occasionally be temporarily alleviated, sometimes very greatly improved, by relief of errors of refraction and exophoria. Transitory paroxysmal hemiopia has seemingly resulted from genital irritation in the female. Nocturnal incontinence of urine in children and night terrors can often be cured by circumcision or relief of a vaginitis. There is not on record, however, a single cure of the graver diseases of the nervous system, such as chorea, myelitis or epilepsy, although in the latter affection temporary relief is often afforded by operation upon the genitals, but to no greater extent than can be given by a number of standard remedies, even by traumata, or (as I have myself seen) by excision of a piece of the skin from the buttock. I am inclined to believe, however, that a genital irritation is a more potent exciting or aggravating cause in mental diseases than it is in purely nervous affections. It must be remembered that there are two great classes of insanity—the one consisting of organic diseases of the cerebrum, such as parietic dementia, delirium grave and epileptic insanity; the other being constituted by what are known as the psycho-neuroses, such as mania, melancholia, primary dementia, hallucinatory insanity, and hysterical insanity. I have never seen any good result from operation upon the genitalia in the insanities due to organic disease of the cerebrum; but in the psycho-neuroses I have frequently observed startling results from such operations, if done at a proper period of convalescence. The following history will make this matter plainer:

Female, aged thirty. Brought to New York from the West, suffering from hallucinatory insanity, which had lasted for upwards of twelve months. Her reasoning powers and memory were excellent, but she had vivid optic hallucinations, and at times illusions. She was very restless, loquacious, eccentric in behavior, and at times difficult to manage. Except so far as she was biased by her hallucinations and illusions, she was perfectly intelligent. She was put upon hyoscine hydrobromate and bromide of potash; and, as she was very anæmic, she was given large doses of iron, at the same time that her food was ordered to be varied and large in quantity. Under this treatment she improved rapidly for a period of about six weeks, and the hallucinations and

illusions disappeared entirely; but her restlessness, eccentricity of behavior, loquacity and occasional uncontrollableness remained about the same, although there would be days of improvement. After this stationary condition of convalescence had lasted for about six weeks, I advised Dr. W. G. Wylie, with whom I had seen the patient in consultation, to attempt relief of an endometritis by curetting the uterus.

This was done and immediate improvement began, and in the course of six weeks the patient was sent home well-nigh cured, the only difference from her normal condition being a slight restlessness and irritability. The improvement progressed so that she is said to have been perfectly well in a few weeks, and has remained so since for a period of eighteen months. This patient came of a highly neurotic family, and was therefore predisposed to the disease.

This history will serve as a sample of three others which I have had of the same form of mental disease—hallucinatory insanity—in which the results were quite as satisfactory, although the cases have been under my observation respectively only three, two and three-and-a-half months since operation. I have had one case of simple melancholia operated upon that had lasted for upwards of eighteen months; but as the operation was only done about two weeks ago, I do not care to make any further report than to say that the improvement so far has been gratifying.

But, after all, we may be betrayed into some confusion of thought about this matter unless we are strictly logical. It does not follow that an insanity has been caused by a genital irritation because the relief of a genital irritation cures the insanity, any more than it follows that opium is the cause of neuralgia because opium relieves neuralgia. There are a great many factors that enter into an operation besides the mere relief of the lesion operated upon. There is the mental expectancy, which is so great in women about anything relating to the genital organs as to amount almost to a blind superstition. There is the principle of suggestion, so potent in producing the phenomenon of hypnotism that down in the south of France, Bernheim, in the town of Nancy, walks through his ward, slinging his finger right and left and saying "Sleep!" and the patients fall over on either side in rows. There is the blood-letting, the low diet, the rest, and the powerful impression made by all these factors upon the nervous system. Dr. White has shown recently, in an elaborate monograph, how successful operations can be in relieving lesions that never existed. Then, too, how many thousands—how many tens of thousands—of women there are in whom

marked genital lesions never produce mental disease! Influenced by these reasons, I have lately tried the effect, in three cases of insanity, of simple etherization. Two were suffering hallucinatory insanity, one having lasted nearly two years and the other eighteen months; and the third was a case of chronic mania whose duration had been nine months. In all three simple etherization was followed by most beneficial results, and in one the relief of the hallucination was as startling as in those that had been operated upon; but in the others the effect lasted respectively for only a week and ten days. That the effect of operations upon the genital organs is a profound one is shown by the further fact that insanity can follow such surgical procedure, as was shown a few years since by Dr. Thomas, whose paper was soon followed by the article of Dr. Mary Putnam Jacobi, giving a resumé of the literature of the subject. (6) I have myself seen two cases of melancholia follow operations upon the genital organs, and this last winter I had one under my care in whom melancholia of the simple type came on soon after removal of a mammary tumor.

For all these reasons, I believe that we are warranted in the following conclusions:

1st. That there is no proof that genital irritation in the male or female can cause nervous or mental disease, except in a predisposed individual.

2d. That the proof is not yet absolute that genital irritation can produce nervous or mental disease, even in a predisposed individual.

3d. That there is undoubted proof that the relief of genital disease in the male and female will often relieve certain nervous diseases, such as migraine, hysteria, epilepsy, simple nervousness, and hallucinatory insanity.

I believe, however, that an operation should only be done in an insane female after the acute period of the insanity has passed, and when convalescence under proper treatment has begun but is not progressing favorably.

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- (5) The Effect of Genital Irritation on the Production of Nervous Disorders. By L. C. Gray, *Annals of Anatomy and Surgery*, January and February, 1882. In this article of mine will be found all the literature up to the date of publication.
- (6) N. Y. *Medical Record*, 1889.

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EDITORIAL.

THE GENITALIA AND NEUROSES.

A very thoughtful paper by Dr. Gray in this issue of the JOURNAL furnishes our editorial text. We heartily endorse most of his premises and gladly welcome the weight of his acknowledged authority against the practice (now happily in merited disgrace) of spaying women for nervous diseases of an *organic* character. In this category we place chorea, epilepsy, myelitis, (which he calls the graver nervous disorders), and all forms of true insanity. Dr. Gray is not the first among neurologists to point out the futility and therefore unscientific character of this method of treatment, nor has the voice of the gynæcological specialist been altogether silent even from the beginning. The significance of Dr. Gray's article lies rather in the fact that he outstrips all others in his agnosticism as to the causal relation of genital irritation and all neuroses. We do not think his *conclusions*, which are distinctly stated at the end of his article, are warranted by the reasons he presents, especially since he says that he has studied all the literature on this subject and offers this, in addition to his own experience, as one of his arguments. These *conclusions* are three, viz.:

1st. That there is no proof that genital irritation in the male or female can cause nervous or mental disease, except in a predisposed individual.

2d. That there is no absolute proof that genital irritation can cause nervous or mental disease even in the predisposed. And

3d. That there is undoubted proof that certain nervous diseases are relieved by the relief of genital irritation.

We are immediately struck with the fact that all these conclusions are negative, and none more so than the last. In this he virtually acknowledges the immense weight of evidence in opposition to his own views, in granting the *sequitur* relation of the relief of neuroses to the removal of genital irritation; but he attempts no adequate explanation of this remarkable series of phenomena. It is here that we must take exception to the author's knowledge of gynæcological facts or to his logic. We venture to say that no American gynæcologist familiar with American plastic surgery would hesitate for a moment in his dissent from the views expressed by Dr. Gray. Why, the mere mention of scars in erectile tissue suggests to every gynæcological plastic surgeon, from his own experience, a long list of neuroses of such various character, so persistent, and so constant in their attendance upon this form of genital irritation, that he can not resist the belief that they are the result of cause and effect. Nor is this belief weakened by his certitude that he can by thoroughly removing this irritation not merely relieve but *cure* absolutely his patient of melancholia, of constantly recurring pain in far-distant organs, of headaches in particular parts of the head, of unnatural aversions, and of many another neurosis, including the kaleidoscopic manifestations of hysteria.

We will leave the consideration of stricture of the male urethra and the nervous system to more competent critics and ask Dr. Gray if he has ever observed a woman suffering from a severe laceration of the cervix uteri, of the urethra, or from a cicatrised fissure in ano. Has he seen this woman again after she has had the particular genital irritation properly removed by a plastic surgeon? There are many distinct neuroses so constantly associated with many gynæcological diseases, such as those just mentioned, that a competent gynæcologist can usually predicate with certainty, in such cases, the particular condition from the nervous history alone, and before he has done more than come within speaking distance of his patient! Many a nervous manifestation can be cured only by an appropriate gynæcological operation. That many would-be plastic surgeons fail to cure these symptoms by operating has nothing to do with the argument.

In the first *conclusion* the author denies all proof of the causal relation of genital irritation and nervous disease *except in a predisposed individual*. The only possible answer to this, from our standpoint, is that, if this be true, a large proportion of all women who have borne children

are thus predisposed. Yet the splendid family and previous histories of many patients do not uphold this view.

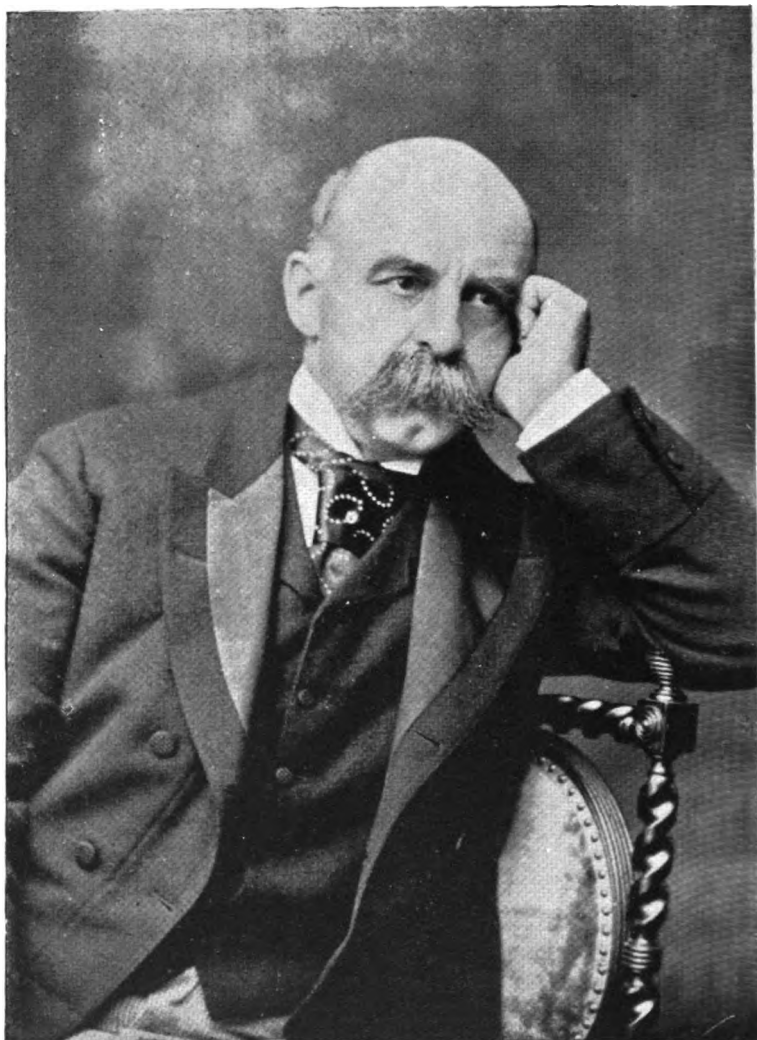
In the second *conclusion* Dr. Gray denies the existence of any positive proof that there is a logical connection between the two conditions *even in the predisposed*. We can take but little exception to this. On the contrary we believe that here genital irritation is incidental only in many cases and becomes a factor in nervous conditions more because it is an irritant than because of its special location. In other words the connection must necessarily be obscure and beyond proof, on account of the predisposition.

Although we have felt compelled as gynæcologists to take issue with Dr. Gray upon several of his deductions, we find much in his excellent paper for our instruction. Everything from so high an authority must command attention, and it is particularly interesting to the gynæcologist to hear the opinions of the neurologist anent the practice of gynæcology. It is a matter of regret (and doubtless of many lives as well) that Dr. Gray and his confrères did not sooner consider publicly the subject of gynæcological *explorations*.

STATISTICS OF THE PORRO-CÆSARIAN OPERATION.

It will hardly be necessary to call the especial attention of our readers to the very valuable contribution of Dr. Harris in this number of the JOURNAL. Dr. Harris is rapidly acquiring so wide a reputation as a pains-taking, honest, and unprejudiced statistician, his methods are so intelligent and exact, that he will undoubtedly take a rare and very enviable place, for this work alone, in the history of the Science of Medicine. The importance of work of this kind cannot be overestimated and the immense amount of labor expended in such a compilation is seldom appreciated by the average medical reader. But it is not alone for his contemporaries that Dr. Harris works; it is future generations of medical men and of women and children, who will derive the greatest benefit from his statistical labors. It is most encouraging in these days of miraculous *personal* statistics to read of the methods for securing accuracy of facts employed by Dr. Harris.

We call attention further to a departure new to medical journalism in this country which we have adopted at Dr. Harris' request. We refer to printing statistical tables in large and clear type. This has long been the common practice in many of the continental countries of Europe and its propriety and great advantage are evident. We shall follow this excellent custom invariably hereafter.



CLEMENT CLEVELAND, A. M., M. D.

NEW YORK JOURNAL OF GYNÆCOLOGY
AND OBSTETRICS.

EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA.

SERIES OF EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA.

CLEMENT CLEVELAND, A. M., M. D.,

Attending Surgeon to the Woman's Hospital and to the New York Cancer Hospital. Mem. Co.
Med. Soc., Acad. Med., Practitioners' Soc.; Ex-Pres. New York Obstet. Soc., Fellow
Amer. Gynæcological Soc., &c., &c.

DR. CLEMENT CLEVELAND was born in Baltimore, Md., on the twenty-ninth day of September 1843. His father was the late Dr. Anthony Benezette Cleveland of Baltimore. The subject of our *sketch* received his preparatory training in the Phillips Academy at Exeter, whence, at the age of twenty, he entered Harvard College, now University, and graduated from that institution four years later with the degree of Bachelor of Arts. In 1870 Harvard conferred upon him the degree of Master of Arts.

For a year after leaving college Dr. Cleveland taught in a private classical school at Newport, Rhode Island. He then took up his residence in New York and commencing the study of medicine received from the College of Physicians and Surgeons, in 1871, his diploma as Doctor of Medicine. He served the full term as interne at the Charity Hospital and later at the Woman's Hospital with great credit. This fact is emphasized by his appointment as Attending Surgeon to Charity Hospital immediately upon the expiration of his internship at the Woman's. He resigned his position in 1881, having retained it seven years. During a considerable portion of this time he held also the post of Assistant Surgeon to the Woman's Hospital. In 1888 he became one of the Attending Surgeons to the latter institution, which position he still occupies. A few years earlier he was one of the organizers of the New York Cancer Hospital, was appointed Attending Gynæcologist, and is at the present time one of the Board of Managers as well.

For many years Dr. Cleveland has practiced in the summer months at Newport, Rhode Island, where he has long held the leadership in general practice as well as in the specialty of gynæcology. In New York also, where he spends the greater part of the year, he has an immense and distinctly fashionable *clientèle*. He is a constant attendant upon medical societies and frequently joins in the discussions and other scientific work.

In private life as well as in his professional capacity he has a host of friends and admirers. Determined will with great simplicity of character, kind-heartedness and a remarkably even temperament, a

quick and intelligent sympathy, are the salient points in his character which win him entire confidence, affection and respect. He is a deft and conscientious operator.

Among his contributions to medical literature may be mentioned: "*Some Observations upon the Feeding of Infants*"; "*A Case of Interstitial Pregnancy*"; "*On Trachelorrhaphy*"; "*On Laparo-Vaginal Hysterectomy*"; "*The Palliative Treatment of Incurable Carcinoma Uteri, Based upon Observations at the New York Cancer Hospital.*" "*Description of a New Self-Retaining Speculum.*" We present with this *sketch* an excellent portrait of Dr. Cleveland.

REVIEW.

THE STUDENTS' QUIZ. SERIES. VOL. II., OBSTETRICS BY CHARLES W. HAYT, M. D.: LEA BROTHERS & CO.

Under the above title, Lea Bros. & Co. will publish before Fall a series of thirteen compends upon medical topics. They are written by a corps of qualified medical teachers and specialists and edited by Gallaudet of New York. Such works are of great value to students in their final struggles before examination and to those busy practitioners who may wish to see at a glance how their treatment of a given case compares with the authorized teaching on the subject. One should not, however, limit his study to such syllabi as their exclusive use is not conducive to broad and thorough scholarship.

Concerning the volume in question, it may be said that being founded upon Professor McLane, it faithfully carries out his teachings. Its scope is comprehensive and its plan is simple. The questions are pointed and the answers are concise without being fragmentary. The author avoids theories and facts not well established. For this reason, probably, the operation of symphysiotomy is condemned without qualification and no mention is made of the work of the past year in this direction. Careful rules are given for the diagnosis of the position of the fœtus by external manipulation, and emphasis is laid upon the hand as the best pelvimeter. The author recommends as a routine practice a bichloride vaginal douche at the completion of the third stage of labor. This proceeding is now considered by many good teachers as unnecessary. In dressing the cord, a linen wrapping is advised. Many obstetricians prefer antiseptic absorbent cotton.

In the treatment of post-partum hemorrhage, nothing is said of

intra-uterine tamponade by iodoform-gauze, and to combat the shock of such hemorrhage the absence of all mention of injections of saline solutions is noticeable.

Many such omissions may be easily rectified in a future edition, and the book may be safely followed as a complete, concise and convenient synopsis of obstetrical literature and practice. J. L. K.

DISEASES OF CHILDREN; by C. ALEXANDER RHODES, Instructor in the Post-Graduate College; Students Quiz Series; Lea, Phila.; \$1.00.

Medical teaching is chiefly memory-stuffing. For the mental indigestion that results, the Quiz-compend is supposed to be of value. And it is of value when its use helps to assimilate and systematise a medley of facts. But the real cure lies in the mental exercise of clinical work.

Of its kind this is a good book. It is clearly and simply written. The reviewer believes that its arrangement of question and answer is wasteful of space, because the difficulty of the student is not to frame questions; it is to discriminate between important and unimportant facts. The chief facts must be salient in a student's helper, and in this form they are not. A variety of types or some such device is of more use.

Nearly every work on diseases of children, except Keating's Encyclopedia, slights the general care, development and feeding of infants. Rhodes passes these topics with clear but very brief outlines. Yet there is hardly any department in which the young practitioner feels himself so helpless in his early practice. His books give him few expedients in the simpler maladies, just as here constipation and diarrhoea are passed with four lines of treatment for one and eight for the other, whereas inflammation of the œsophagus is credited with half a page, and melæna neonatorum has the same allotment. R. L. D.

RECENT FOREIGN PUBLICATIONS.

DOEDERLEIN, A., Leitfaden für den geburtshülflichen Operationskurs. Mit 98 Abbildungen. geb. Leipzig. \$1.20.

FRITSCH, H., Bericht ueber die in der Breslauer Universitäts-Frauenklinik im Jahrgang 1891-1892 ausgeführten gynæcologischen Operationen. Mit Abb. Berlin. Nearly ready.

LEOPOLD, G., Arbeiten aus der Königlichen Frauenklinik in Dresden. Bd. I. m. 10 Abb. 8v. 25 Bogen. Leipzig. Nearly ready.

NEUNHOEFFER, F., über Dermoidcysten der Ovarien. Diss. 8v. (32 S. m. 1 Taf.) Tübingen. \$0.30.

TOUVENAIN, L., manuel de la Sage-Femme et de la Garde Malade. In 18v. rel. Paris. \$0.85.

These books may be obtained from L. Hydel, 212 E. 50th St., New York. Delivered in New York at the prices above stated.

CORRESPONDENCE.

COLUMBUS, O., February 27th, 1893.

Editors of N. Y. Journal of Gynecology and Obstetrics :

GENTLEMEN: In your issue of last December I notice an interesting report by Dr. Malcolm McLean, in which he details a case of conversion of a face-presentation into a vertex. Until I read his report I had no idea that the operation indicated was at all unique.

On the 16th of May, 1883, I happened to be in Wheeling, West Virginia, with a medical friend who was the Professor of Obstetrics in a well-known medical college. While there, we were asked by Dr. James E. Reeves to see with him a case, to which he had been called in consultation, of face-presentation with the chin toward the sacrum. Arriving at the house, I told my friend, the professor, to show the physicians how to deliver a case of the sort. He made an examination of the case, and promptly announced that it was a case of a double-headed monstrosity. As I might never have another opportunity to examine a case of the sort, I proceeded to investigate, but could make nothing more of it than had Dr. Reeves, namely, a face-presentation with the chin toward the sacrum. The professor apparently yielded the point as to the monstrosity. Forceps were applied, but all attempts to deliver were futile. I then suggested to the professor that I thought he would be able to flex the head and convert it into a vertex presentation. He did not think it would be possible, and made no serious attempt to make the change, but yielded the place to me. By a similar manœuvre to that carried out by Dr. McLean, I succeeded, without much difficulty, in producing the desired flexion and a vertex presentation. The child was large, and without further delay or attempt to extract with forceps the professor proceeded quickly to perforate the head. Ossification was so complete, however, that there was no diminution in the size of the head as a result of the perforation and we finally delivered with the forceps. The child had, of course, lost some blood as a result of the perforation, and a small amount of brain matter, but it weighed nearly eleven pounds, showing that it was an usually large child. The patient was a primipara and gave no evidence of having an unusually capacious pelvis.

Our friend, the professor, died a few years ago, but Dr. Reeves still lives, and I have no doubt well remembers the circumstances of the delivery. He is now living in Chattanooga, Tennessee.

Since this occurrence I have never had occasion to resort to the method described, as I have been able in all my cases since then to carry the chin to the front.

In this connection I may be allowed to state that I have on several occasions succeeded in extending the head so as to convert an occiput posterior position into a face-presentation, with the chin to the front, thus simplifying very materially the process of delivery. This procedure, I believe, is mentioned in some of the older works on obstetrics, but has been lost sight of by some of the more recent authors.

Very truly yours,

J. F. BALDWIN.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, February 7th, 1893.

GEORGE TUCKER HARRISON, M. D., President, in the chair.

Myo-Fibroma of the Uterus Complicated with Double Pyosalpinx.

DR. B. H. WELLS presented for Dr. H. J. Boldt a specimen from such a case.

The specimen was removed by the method which has been described by me on former occasions, namely, taking out the entire uterus with adnexa from above, closing the floor of the pelvis and sewing the peritoneum over the stumps.

The patient had had numerous attacks of local peritonitis and one of general peritonitis, which, however, were unquestionably due to the diseased adnexa. She had been under nearly constant local treatment for five years for the hemorrhages due to the myoma and, as evidenced by the history given by the patient and her last medical attendant, the diseased condition of the adnexa was in my opinion due to the local treatment.

On examination under anæsthesia a week prior to operation the large pyosalpinx for which the specimen is particularly of interest,

was readily mapped out and the density of the adhesions were also determined. The right appendage was not located, and, from its position as shown in the specimen, the cause of this is evident. The tubo-ovarian abscess being twisted behind the uterus, which is with its body proper retroflexed and resting upon the appendage, was consequently at the time of examination mistaken for a portion of the fibroid.

The appendage is intimately adherent to the uterus in its entire dimension, so that separation of the adhesions is impossible. The ovarian abscess is in direct communication with the pyosalpinx, as was shown by the rupture of the ovarian abscess during the separation of adhesions; the tubal pus also emptied itself through the opening thus produced. Hence we have here an example of true tubo-ovarian abscess.

The case further illustrates the importance of careful examination, under narcosis, if necessary, in order to arrive at a diagnosis as well as the great danger of some forms of local treatment, especially if full antiseptic precautions are not taken.

A Specimen of Ovum from a Case of Extra-Uterine Pregnancy of about the Fourth Week.

Dr. W. T. LUSK presented such a specimen with the following remarks:

Patient was twenty-one years of age and was the mother of one child, born in October, 1891. In August, 1892, there was a history of gonorrhœal infection. Menstruation was suspended. In September a profuse hemorrhage occurred. From August until her admission to Bellevue Hospital, January 31st, 1893, she was invalided by pelvic pains and a profuse irritating leucorrhœal discharge. An examination indicated that the uterus was displaced forward and to the right by a fluctuating tumor seemingly the size of a small orange situated behind and to the left. The operation, February 4th, was undertaken for a supposed purulent salpingitis. After making an abdominal incision an exploration showed that the intestines were matted together and adherent to the pelvic peritoneum. Their separation was a work of considerable difficulty. When this was accomplished the tube, the ovary, and a cystic tumor beneath the tube and situated between the folds of the broad ligament were brought into view and after ligation were removed.

The cyst had thickened white walls and contained a half ounce of pus, but on careful examination, as is herewith shown, an embryo of

about four weeks' development was discovered. The patient recovered without any disturbing symptoms.

DISCUSSION.

Dr. MALCOLM McLEAN said it would be interesting to decide whether this was a suppurative process secondary to the death of the ovum, or whether it was a result of infection occurring previous to the death of the ovum.

Dr. LUSK said that in this case there was a history of gonorrhœal infection, but in a specimen which he had exhibited to the Society on a previous occasion a large hæmatocele had first been developed in the pelvis. About a year later abdominal section was performed, and the ovum was found between the folds of the broad ligament. The ovum sac contained pus secondary to the death of the ovum.

Remarks on the Practical Value of Antiseptics in Midwifery. Auto-Infection in Puerperal Cases.

Dr. H. T. HANKS made some remarks with reference to the value of antiseptics in the practice of midwifery. He said that he had been called recently in consultation to a number of cases of confinement complicated by puerperal endometritis and perimetritis, yet he had gone directly from these patients and performed a laparotomy, and the patients' temperature after the operation never rose above 100°. A few hours after this operation he had attended a confinement, and this patient also had made a most satisfactory convalescence. Within the past week he had had a case of puerperal pyosalpinx which had been treated for catarrhal salpingitis by a distinguished gynecologist here about eighteen months ago, and he had himself attended her for about six months for the same condition, after which she became pregnant. After the third month she had had very little pain from the salpingitic trouble. She was delivered at full term after a normal labor, but within a few days after confinement the old disease again became active, and she had such a decided metritis and endometritis as to require curetting and packing. She is now doing well. The object of the foregoing remarks was to show that we can go from septic cases to operations and to other confinements with perfect safety to our patient if proper antiseptic precautions be taken.

DISCUSSION.

THE PRESIDENT remarked that he thought many of these cases of puerperal fever coming on late in the puerperium were due to sal-

pingitis, probably of gonorrhœal origin. He had seen such a case in consultation in which the attending physician evidently did not understand the etiology of the disease, for, being positive that there was nothing which he had done which could be held responsible for the septic condition, he was at a loss to explain it.

Dr. Lusk said that he had seen several such cases and, while they were comparatively rare, they showed that the attending physician was not necessarily responsible for the development of every case of puerperal septicæmia. An old salpingitis is very likely to become suddenly active at the time of labor. He referred to a case in which a woman, whose husband was known to have had gonorrhœa previously, developed a large swelling on the right side of the uterus, which ruptured discharging its contents into the peritoneal cavity and so causing death.

Dr. H. N. VINEBERG said that in connection with the subject of late puerperal infection he wished to refer to two cases which he had seen recently, and which had puzzled him a good deal. The first was a healthy primipara who was delivered normally at full term and got up on the tenth or twelfth day. About the end of the fourth week she had a chill and a general perimetritis, from which she recovered in due time. The second case, also a primipara, had been previously treated for a catarrhal salpingitis and a posterior perimetritis. She also went to full term, had a normal labor and made a good recovery, but in the third or fourth week, without evident cause, she developed fever and evidences of inflammation and exudation around and behind the uterus. In these cases it seemed quite late for an ordinary puerperal infection to occur, and yet this was the only explanation he could offer.

Dr. W. G. WYLIE said that an examination of the statistics of our lying-in institutions would show that auto-infection from old salpingitis in a person going to full term must be of exceedingly rare occurrence. For instance, it would not be likely that six hundred cases could be delivered in the Sloane Maternity Hospital without a single case of puerperal septicæmia, if such conditions were common. Again, there are men who have practiced obstetrics for upwards of twenty years without ever having had a case of puerperal septicæmia. He had recently had a case which seemed to point to auto-infection, yet he did not believe that the infection really occurred in that way. The patient was sent to him by a physician out of town, some time ago, and on examination he had found a salpingitis on the right side and had advised operation. The operation was not performed; she

became pregnant subsequently and was delivered about one month ago. There was no rise of temperature until after labor, when she developed quite an acute attack of puerperal fever and a pelvic abscess which ruptured into the rectum before an operation could be performed. He thought in this case it was highly probable that infection occurred after labor, although the attending physician was inclined to consider the source of infection was the salpingitis which the speaker had diagnosed. He was satisfied that many mistakes were made even by very experienced gynecologists in the diagnosis of salpingitis, and it was highly probable that in this case he had himself been mistaken in the original diagnosis.

He fully endorsed what Dr. Hanks said about antiseptics, and he did not think we could get along without antiseptics. While abroad he took occasion to visit some of the men who were reported as not believing in the use of antiseptics and he found that, although they did not use antiseptics much during their operations, they kept the beds and dressings almost like strict Lister dressings. It seemed to him that the time had come when the young physician should feel ashamed to see a case of puerperal fever in his practice, and he thought the time would come when an investigation would be demanded whenever such a case occurred. The number of cases of salpingitis which come into Bellevue Hospital is enormous. About four out of every five of these cases he believed were due to septic troubles connected with the puerperium. Seven or eight years ago in Bellevue Hospital, as a demonstration of his faith in antiseptics, he deliberately operated upon a very septic puerperal case and upon the following day, after a liberal use of antiseptics, with the same instruments, the same assistants, and some of the same sponges, he performed two laparotomies in the same room without a mishap.

Dr. Lusk recalled a case in which the patient's husband had an old gonorrhœa. He saw the wife for the first time after labor had begun. She already had general peritonitis and a large pus sac on the right side of the uterus. This pus sac, which had existed before any examination had been made, gave rise to general peritonitis during labor and the patient died of the peritonitis fourteen or fifteen days later. In this case the possibility of infection at the time of labor could be absolutely excluded. Now and then an old purulent collection in the pelvis will increase during pregnancy and becoming active during labor may lead to a fatal result. This is unquestioned; hence there are cases in which the accoucheur cannot be justly blamed.

Dr. W. G. WYLIE said that he noticed in the cases reported that the salpingitis was on the right side, and he would therefore call attention to the possibility that the vermiform appendix was the source of infection and not the salpingitis.

Dr. HANKS said that in the case which he had reported he felt morally sure that the patient had had disease of the right tube even before he attended her, and equally certain that there was no involvement of the vermiform appendix; although he could not be sure of course that the infection came down from the tube, this seemed to be the most reasonable explanation in connection with the history of the case.

Dr. VINEBERG remarked that in one of his cases the tubal trouble was on the left side.

Dr. BROOKS H. WELLS said that he had seen a case similar to the one described by Dr. Lusk, a young woman who had been perfectly well up to the time of her marriage. Her husband had contracted gonorrhœa three or four months previously but had been told by his physician that it was no longer infectious. Shortly after her marriage she began to complain of dysmenorrhœa and pain on the right side of the abdomen; an examination showed the existence of a salpingitis. She became pregnant and did fairly well with the exception of some pain on the right side. The speaker attended her in confinement and had the assistance of a most excellent nurse. Only one vaginal examination was made and there was apparently no chance for the introduction of septic material at that time. There was an elevation of temperature to 100° within a half hour after the child was born, she then began to complain of pain in the right side of the abdomen, and a large hard mass soon developed on this side. Shortly afterward she developed pneumonia of the middle lobe of the right lung from embolism and a similar pneumonia of the opposite lung on the following day. Laparotomy, which had been proposed, was therefore deferred. She finally recovered with a slight mass on the right side.

A New Trocar for Tapping Cysts. (For cut see *New Instruments*, page 351.

Dr. J. D. BISSELL (present by invitation) described a new trocar which he had devised for facilitating the evacuation of cysts. The portion of tube carrying the cutting edge increases in diameter for a short distance behind this edge, so that, as the instrument is thrust within the cyst, the walls of the cyst press tightly around the instru-

ment. The cyst wall then slips over a shoulder on this tube and is grasped and securely held by pushing forward another tube which slides over the first one. In order to hold the tumor more securely the end of this tube is serrated. By the same motion of the finger which pushes the outer tube forward, thus making it grasp the tumor wall, a blunt edge is brought into such position that it shields the cutting edge of the trocar and prevents any injury from this portion of the instrument. Dr. Bissell demonstrated satisfactorily the action of this instrument by puncturing a bladder filled with water.

Catheterization of the Ureters in the Female.

Dr. BROOKS H. WELLS read a paper with this title: (See page 283.)

DISCUSSION.

Dr. H. L. COLLYER said that when the author first began using this method he had an opportunity of observing his work and had been impressed with the ease with which he accomplished this seemingly difficult procedure. Previous to this the speaker had mapped out the ureters by bimanual palpation but had not attempted to introduce the ureteral catheter. In some of the cases the question arose as to whether or not the instrument was really in the ureter, and it was found that when the catheter was in the ureter it was comparatively immovable. There are many conditions of the ureter which can be diagnosticated by means of the ureteral sound, and with an ordinary sound the ureter can be palpated and entered. In many instances the ureter will be found distended and dilated. The catheter requires more skill to pass it than does the sound. This method of exploration is a very valuable diagnostic resource, and one which if more generally employed, would prevent many needless operations upon the kidneys.

Dr. VINEBERG did not understand why there should have been so much difference in the urine found in the bladder, in the case reported, and that from the ureters. He would like to ask for an explanation of this. With the patient in Brandt's position, he had frequently been able to satisfactorily palpate the ureters, but he had never attempted the introduction of the ureteral catheter.

Dr. McLEAN wished to emphasize the caution given in the paper as to the possibility of doing considerable mischief in attempting to find the ureteral openings. The vesical mucosa is a very delicate membrane; this should be borne in mind and special care taken to make the examination under antiseptic precautions and with the greatest gentleness.

Dr. W. G. WYLIE said that he had had considerable experience in kidney operations but had only attempted ureteral catheterization on one or two occasions. In those cases where the condition of the kidneys seems to demand operation the kidney is usually displaced forward, so that an expert examiner can palpate it. An examination of the patient lying on the back under an anæsthetic is a very faulty method, but if the patient be sitting upright the loose kidney will in very many instances drop forward and thus often be very satisfactorily palpated. This explained the remark once made by Dr. Loomis to the effect that he rarely saw cases of loose kidney, and that his students had made extensive studies in the dead-house for a number of years and had only found three such cases. The speaker said that of all the women with chronic uterine trouble whom he had examined under ether, in fully fifteen or twenty per cent. the right kidney could be easily felt by examining the patient in the manner described; hence, when a kidney is so diseased that it requires to be removed, abdominal palpation will in the majority of cases demonstrate its condition. The chief value of catheterization he thought was in determining the exact position of the ureters in performing the radical operation for cancer of the uterus.

Dr. WELLS, in closing the discussion, said that allusion had been made to passing the uterine sound into the ureter. The easiest way to learn how to catheterize the ureter is to take a small Simpson sound with a slender point having a curve to it nearly like that employed in sounding the uterus, and passing this instrument into the bladder endeavor to engage its end in the ureteral orifice. The cystoscope requires a reliable battery to furnish current for the lamp, and the best in his experience is the Edison-Lalande, six cells being required. Regarding the difference between the urine from the bladder and that from the ureters in the case reported, he said that the urine from the bladder was alkaline and loaded with a large quantity of pus and mucus, so that the casts were obscured by this sediment and also decomposed rapidly owing to the alkalinity of the urine. He was glad that the necessity of cleanliness and gentleness had been so strongly insisted upon. There are certainly some cases of kidney disease in which the diagnosis is not readily made, even by experts; for instance, there are cases in which it is difficult to ascertain whether blood or pus in the urine comes from the bladder or from the kidneys and, if from the kidneys, from which one.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY. .

Stated Meeting, February 21st, 1893.

GEORGE TUCKER HARRISON, M. D., President, in the chair.

A Vesical Calculus with a Piece of Absorbent Cotton as a Nucleus.

Dr. GEORGE C. FREEBORN presented a phosphatic stone which had been removed from the bladder of a woman fifty-one years of age, who was in the service of Dr. Hanks at the Woman's Hospital. The stone had been sent to the speaker for examination and on cutting into it he found that the nucleus was an oblong mass of cotton. A similar case was reported in the *New York Medical Record*, December 10th, 1892; in that one there was a history of the attempt to introduce a piece of cotton moistened with iodine into the uterus, and the supposition was that the cotton had been by mistake inserted into the bladder.

A Fibro-Cystic Tumor.

Dr. W. GILL WYLIE presented the above specimen with the following history:

Mrs. G. Patient emaciated, anæmic and with a septic appearance, age fifty-five. Married twenty-nine years, four children, last one born 1880. No trouble followed. Miscarriages, three; all before last birth. Flowed for a long time after one miscarriage at six weeks and something passed from her. Came near dying two years after that from an abortion, which a doctor caused by mistake. Menstruation began at eighteen; meno-pause at fifty; regular, twenty-eight days; duration, eight to ten days. Flow very profuse, clotted late in life; pain, none. Felt best when pregnant. Leucorrhœa, very little. Bowels, constipated lately. Family, father died and brother and two sisters died of phthisis. Mother living; eighty-three years old. Previous health, never strong nor able to walk much or sweep, but could go about house without trouble. Colds always seemed to affect both ovaries. Four years ago she was abed two weeks with an attack of pain in region of ovaries following a drive. She knew of no cause for attack.

Present Trouble. Four months ago she wrenched herself in getting out of bed and found a "lump" in her side about right ovary. It

was movable she thought. On December 21st, 1892, she had another attack of pain in sides and also bladder, and intense pain in "lump" mentioned above. It soon disappeared and returned again just as suddenly ten days ago. It has not since left her. Does not know if she had fever with former attacks, but temperature now averages from 101° to 103° and 104° . Had no chills before present attack, but now has severe chills and sweating. Pain, grinding in character. Large tumor in right ovarian region. Operated.

Physical Examination. Whole pelvis and abdomen to two inches above umbilicus filled with a semi-solid firmly fixed tumor, and the uterus enlarged and moves with tumor. Pulse very feeble and temperature 104° at the time of operation, January 1893. When the abdomen was opened extensive adhesions involving whole tumor were found and bloody serum escaped. The tumor seemed to be a cystic sarcoma and on account of the extensive adhesions looked hopeless especially as the patient's condition was so bad. To close the wound was to let the patient have septic peritonitis in a few days so I decided to remove the tumor with the hope that it would prolong life. The adhesions were separated so as to enable me to secure the pedicle with clamp forceps. I then rapidly enucleated the whole tumor, which broke down readily. The patient was given hot rectal enemata every twenty minutes during operation and for some time afterward. The intestines, uterus, etc., were adherent to the tumor had apparently become affected but no organ was torn or seriously injured. The patient, although very low for twelve hours, gradually improved, and heart was normal in a few hours. She has made an uninterrupted recovery.

Myomata of the Uterus.

Dr. W. GILL WYLIE presented the above specimens, with the following histories:

Mrs. E. Patient is anæmic but not emaciated. Age, thirty-seven. Married eighteen years. One child born ten years ago, fever followed and has had a sore spot about left ovary ever since. Miscarriages, none. Menstruation began at fourteen; last, January 31st, 1893; every twenty-eight days; duration, seven to eight days; flow free; now clotted; pain, none till present trouble. Leucorrhœa, bad before this trouble. Bowels, regular. Kidneys, all right. Family, healthy. Previous health, good till childbirth.

Present Trouble. Sore spot in left ovarian region since childbirth. Has known for six years that she had a fibroid tumor, but it did not trouble her till three years ago. She then began to flow very freely. It continued at short intervals till she became very thin and anæmic. On February 8th, 1892, she was curetted by Dr. Wylie. Uterus was about 6-9 inches deep. In three days she began to have elevation of temperature and chills. The treatment consisted of intra-uterine irrigation and drainage. She was in bed about eleven weeks and during that time tumor decreased much in size and flow ceased entirely. Trouble seemed caused by inability of uterus to react and repair. Menstruation afterwards was normal till last two periods. She now flows much too freely and tumor is increasing perceptibly in size. She has no trouble except flow and comes to have fibroid removed.

Operation. Suprapubic hysterectomy with complete enucleation of fibroid and removal of uterus and both ovaries, February 13th, 1893.

February 13th, 1893. Patient anæmic and pulse small and weaker than normal. Tumor fills the pelvis and reaches above umbilicus, the whole uterus is uniformly enlarged, cervix firm and small. Abdomen was opened, uterus size of six months pregnancy, very vascular and elastic. Left broad ligament and ovary could be readily reached, but the right broad ligament was twisted and ovary buried deeply under the tumor. The broad ligaments were tied and cut and the tumor lifted up and both uterine arteries ligated. The peritoneum was cut around base of tumor or uterus, stripped down, and the cervix cut off at the vaginal junction. The peritoneal surfaces were sewed up and the abdomen closed. A small drain of gauze was passed down the cervical canal so as to drain the stump by vagina. Except for small abscess in incision patient is now convalescing normally. Had the operation been without first curetting to stop hemorrhage, allowing the patient time to regain her strength, hysterectomy would have failed.

Mrs. W. Patient rather fleshy but pale. Age, fifty-one. Married. Menstruation regular. Gives history of uterine hemorrhage of several months duration which is painless. Curetted September 28, 1892. Very free hemorrhage. Considerable amount of cancerous material scraped away for examination. Nothing was visible at cervix. Hemorrhage was controlled with hot water injected into uterus. The curetting stopped flow and as soon as an examination could be made of scrapings and patient got in condition vagino-abdominal hysterectomy was done on October 11, 1892. Tumor was size of a six year old child's head and filled the pelvis and was too large to remove *per*

vaginam. When abdomen was opened the tumor was found moveless, fixed by the adhesions of an old salpingitis. Both tubes were occluded and adherent. The broad ligaments were tied and the whole uterus removed in the usual way. The case had been curetted a year or more before but was not recognized as cancer although the flow came on several years after the menopause. Patient so far seems perfectly well.

Mrs. F. Rather stout with good color. Age, forty-five. Married fourteen years. No children. Two miscarriages, one March 1892, another June 1892. In bed two weeks after first but no trouble resulted from either. Menstruation began at fourteen; last period, January 23, 1893; regular every twenty-eight days; duration, three to six days; flow free. Pain severe and grinding low down in abdomen. No pain in sides. Peritonitis, none. Leucorrhœa, none till eight weeks ago. Bowels, constipated without Carlsbad. Family healthy, no history of tumors. Previous health, good. Measles in November 1891, and in May 1891 menses stopped and did not appear for about a year. Present trouble, in September, 1892, three months after last miscarriage she began to have distension, pains in uterus or cervix from which she could get no relief. Her doctor examined and found a tumor in cervix uteri, for which she went to a hospital in Ontario in November, 1892. It was scraped out. No anæsthetic given. It returned in the same position in January 1893, and on January 22 felt the same pain beginning again. She has taken ergot but no opiates. A foul discharge began in January. She also had foul discharge before first operation. Heart normal. Lungs normal. Kidneys normal. No rheumatic trouble. Tumor in cervix size of a lemon. Curetted February 2. Specimen examined. Hysterectomy February 11, 1893.

The uterus was removed by the vagina. When removed and cut open, although the uterus was not above the normal size, a small sarcomatous growth was found in the left cornu about the size of the end of the little finger. The tissues of the cervix below the os interum were affected in the same way where the tumor the size of a lemon had been removed but the two growths were entirely distinct from each other. The specimen demonstrates perfectly the uselessness of relying upon the so-called high amputation for the case of cancer of the uterus, or of burning off even with the electric cautery the disease at the cervix.

Ectopic Gestation and Superfœtation.

Dr. E. B. CRAGIN presented such a specimen with the following history: I should like to present this evening specimens from a case

of ruptured ectopic gestation which seemed of unusual interest. Mrs. B. D., æt. 23, native of Ireland, married five months, admitted to the Roosevelt Hospital February 13th, 1893. She had formerly been upon the Medical Division of the Hospital for tubercular trouble. Her previous menstrual history had been normal save that the periods were painful. Last menstruation occurred December 18th. On the the night of February 12th, following sexual intercourse, she was suddenly seized with severe sharp pain on the left side and faintness. Her physician, Dr. E. V. Delphey, was summoned and suspected ectopic gestation with internal hemorrhage. Later in the day the symptoms of hemorrhage increased and she was sent to the hospital.

When seen by me she was anæmic, restless, with pulse 130-140 and with abdomen distended and very tender. Preparations were at once made for cœliotomy. Operation disclosed the abdomen filled with dark blood and bright blood coming from the ruptured wall of the left Fallopian tube. This was ligated and removed, the cavity sponged out and the abdomen closed.

The specimen shows a gestation-sac in the inner portion of the tube near the uterus but separated from it by a constriction of the tube. A section of the wall of the sac showed marked examples of chorionic villi.

On the following day the patient, after severe cramp-like pains, expelled from the uterus and vagina a foetus of about six weeks' advancement completely enclosed in its membranes, all of which I here present. On first thought the question might be raised: Was not this foetus originally in the tube and then expelled into the uterus? This is positively disproved by finding in the tube a constriction between the gestation-sac and the uterus, and, what is of more importance, by finding the chorionic villi in the wall of the sac.

We evidently had here a superfoetation, the earlier being intra-uterine, the other extra-uterine. The patient is making an uneventful recovery.

Dr. CRAGIN also presented a specimen of

Tubal Abortion.

I should also like to present the specimen from another case operated on just a week previous to the foregoing. The patient was Mrs. T., seen in consultation with Dr. Houghton, of this city. She

was twenty-three years old, married five months. Previous history good save pain on right side during menstruation. Last menstruation occurred in November. Symptoms of pregnancy followed. In the latter part of January she had a severe attack of pain in the right iliac region, felt faint and began to flow a little. This flow continued until the operation. The attacks of pain were several times repeated. The day before she was seen by me she passed what proved to be a complete decidua, a portion of which I present with the specimen this evening. On the night of the day following the passage of the decidua she was seized with another attack of pain, more severe than any preceding, and this time accompanied by evidence of internal hemorrhage. Dr. Houghton diagnosed rupture of an ectopic gestation-sac and I was hastily summoned. Having concurred in the diagnosis, and as the symptoms of active hemorrhage were increasing, I immediately prepared for operation. On opening the abdomen, which was full of blood, the hemorrhage was found to be coming from the fimbriated extremity of the right Fallopian tube, which had been distended but was then collapsed; in other words we had to deal with a case of tubal abortion. This appendage was removed, cavity sponged out and abdomen closed. Before the opening of the sac for examination the wall of the tube was seen to be intact. I present the case as emphasizing the value of the decidua in the diagnosis of ectopic gestation.

The patient is making a good recovery. There appears rather a marked similarity in the two cases. Each was twenty-three years old; each had been married five months; both had to be operated on late at night for active internal hemorrhage. They occurred one week apart.

DISCUSSION.

Dr. J. R. GOFFE asked if it were not unusual to have so much hemorrhage in tubal abortion.

Dr. CRAGIN replied that he had seen the statement made by Mr. Bland Sutton that, in his experience, hemorrhage from tubal abortion was more marked than in rupture of the tube, but the speaker's experience had not coincided with this up to the present time.

Dr. H. T. HANKS asked if the speaker considered the intra-uterine foetus to be the older one simply on account of its size.

Dr. CRAGIN replied that he could not find any foetus in the tube, and the sac was smaller than in the uterus. This was his only reason.

Conversion of a Vertex into a Shoulder Presentation by a Champetier Balloon Dilator; Direct Podalic Version with Recovery for both Mother and Child.

Dr. J. CLIFTON EDGAR reported this case as follows:

M. L., age thirty-five, married, Russian, first labor in 1881.

Her previous confinements were normal with the exception that they were all exceedingly tedious.

She has had no sickness during the present pregnancy, her urine is normal, and her pelvic measurements are as follows:

Circumference of pelvis, $35\frac{1}{2}$ inches; spines, $9\frac{3}{4}$ inches; crests, $11\frac{1}{4}$ inches; trochanters, $11\frac{1}{2}$ inches; external conjugate, $7\frac{3}{4}$ inches.

Promontory of sacrum not palpated.

At an ante-partum examination December 31st, 1892, some œdema of the ankles was present; the uterus was regular in outline and in the median line; dorsal plane of the foetus was to the left; small parts to the right in the fundus; and the head was found presenting.

Fœtal heart 138, regular, to the left side of the abdomen and below the line of the umbilicus.

The present labor began February 1st, 1893, and the pains continued with varying frequency and force until the morning of February 3d, when Dr. H. A. James, the Resident Physician at the Lying-in-Hospital, consulted the writer over the telephone regarding further treatment, as the prolonged labor was beginning to tell upon the woman—the membranes being intact, the foetus' condition remained good.

At this time the os was dilated to the size of a silver quarter; the cervix long, rigid and apparently very much hypertrophied; lower uterine segment noticeably thin.

The vertex presented in the L. O. A. position, and the head stood firmly engaged in the pelvic inlet, with the membranes stretched tightly over the scalp.

The writer directed Dr. James to introduce a Champetier balloon dilator, which he promptly did at 11.00 A. M., and distended it fully with a weak bichloride of mercury solution.

For two hours preceding the introduction of the dilator all uterine action had been absent.

Twenty minutes after the dilator was placed within the uterus, strong uterine contractions commenced, which increased in force and frequency until 1.40 P. M., when the dilator was expelled from the cervix.

This is the first accident observed, as far as the writer is concerned, and is one that, from the action of the dilator, is very liable to repeat itself in the practice of those who make use of such a means of securing cervical dilatation to the exclusion of the hand or Barnes' bags.

As can be readily seen, the action of this instrument is essentially different from that of Barnes'.



FIG. 1. CHAMPETIER DILATOR IN PLACE WITHIN THE UTERUS. AN-L. O. A. POSITION OF THE VERTEX HAS BY ITS USE BEEN CONVERTED INTO A R. SCAP. P. POSITION OF THE SHOULDER.

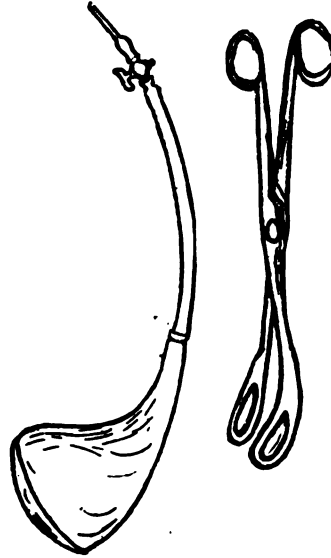


FIG. 2.

FIG. 3.

FIG. 2. CHAMPETIER BALLOON CERVICAL DILATOR.

FIG. 3. FORCEPS FOR INTRODUCING THE ABOVE INTO THE UTERUS.

In the latter the extremity of even the largest bag extends but a short distance into the uterine cavity, and dilatation depends upon hydraulic pressure from within alone.

In the former the very distention of the dilator in that portion of the lower part of the uterus between the presenting part and the internal os tends to increase this space, either by forcing the lower uterine segment downward or the presenting part upward, unless per-

chance the cervix be so dilatable as to permit of the apex of the instrument immediately forcing its way through the os, in which case no indication would exist for the introduction of the instrument.

In the present instance two hours and forty minutes were consumed in the presence of strong uterine contractions, from the introduction of the dilator, through a cervix the size of a silver quarter, until full dilatation of the cervix was secured; and although the head was, to begin with, firmly fixed in the brim, yet its displacement followed and a shoulder presentation resulted.

The writer's experience has been that the Champetier dilator acts more surely as a uterine excitor than does the rubber bag of Barnes, which latter Barnes no longer claims as an originator of uterine contraction *per se*.

Several years ago Playfair¹ pointed out that

"A subsidiary objection to the bags (Barnes) is the risk of displacing the presenting part."

"I have, for example, introduced them when the head was presenting, and on their removal found the shoulder lying over the os."

"It is not difficult to understand how the continuous pressure of a distended bag in the internal os might easily push away the head, which is so readily movable so long as the membranes are unruptured. Still, if labor be in progress and the os insufficiently dilated, the possibility of this occurrence is not a sufficient reason for not availing ourselves of the undoubtedly valuable assistance which the dilators are capable of giving."

Remarks on Abdominal Hysterectomy for Small Fibroids with Specimens.

Dr. POLK presented two specimens, the result of abdominal extirpation for prolapse of the uterus. He also presented one specimen of small fibroid of the uterus.

He wished to ask the attention of the Society, not so much to the propriety of abdominal hysterectomy for large fibromas, as he considered that question settled in the affirmative by the limitation of the mortality which had been reached since complete extirpation had been found feasible, but he wished to call the attention of the Society to the question of its application in small fibroids, such as the one he presented, whose presence, either because of hemorrhage, pressure

¹System of Midwifery.

or some degenerative change, gave rise to chronic invalidism—to that class of tumors in which life was in no way involved, but in which it was simply a question of freedom from annoying symptoms—a question of health. Is abdominal hysterectomy advisable in such cases? Is the operation sufficiently free of risk to enable us to advise it as a cure?

In answer to this question, he would present the record of the patient from whom the fibroid presented was removed. He was aware, however, that one case is not enough upon which to base a proper conclusion. He, therefore, introduced the cases of procidentia as bearing directly upon the safety of the process, for it must be borne in mind that in the operation for procidentia more is done than if it were merely extirpation; the operation, as done by him, involved not merely removal of the uterus, but after removal, a transfer of the upper supports of the uterus to the vagina, and where the vagina was long enough even an attachment of that organ to the abdominal wall. In other words, procedures were added which prolonged the operative work, so that the recovery in such cases would represent a severer test than a recovery in simple extirpation for a fibroid of corresponding size.

Fibroid.

		1	2	3	4	5	6	7	8	9	10
CASE I.	Temp.	97	100 ³	101	100 ⁶	100 ⁵	100 ²	100	99 ²	99	98 ⁴
	Pulse	60	78	88	78	84	80	60	65	60	60
	Resp.	26	22	26	22	26	22	22	22	22	22

Procidentia.

		1	2	3	4	5	6	7	8	9	10
CASE I.	Temp.	98	100 ³	99 ⁶	99 ⁶	99 ⁵	100	100	99 ⁶	100 ²	99 ⁸
	Pulse	100	120	130	115	108	100	108	100	100	90
	Resp.	26	28	20	24	24	20	20	20	20	22
CASE II.	Temp.	97 ³	100 ⁶	100 ⁸	100 ⁴	101	102	101 ⁴	99 ⁸	101	98 ⁴
	Pulse	98	120	120	118	116	118	112	112	108	108
	Resp.	20	32	26	28	28	26	24	28	32	28
CASE III.	Temp.	98 ²	99 ⁴	98 ⁸	98 ⁴	99 ⁵	99 ²	98 ⁴			
	Pulse	68	104	104	116	104	92	76			
	Resp.	20	24	28	20	20	20	20			
CASE IV.	Temp.	99 ⁴	101	101 ⁴	101 ²	101	100 ⁶	99 ⁵	98 ⁶		
	Pulse	80	104	104	108	108	96	90	86		
	Resp.	24	28	25	24	22	20	22	24		
CASE V.	Temp.	99	100	101 ²	100 ²	101	101 ⁶	100	100	99	
	Pulse	78	80	72	68	76	85	76	72	70	
	Resp.	18	21	30	23	18	24	21	24	24	

These records all show how smooth the convalescence from the operation was in all cases, and how slight the general disturbance resulting from the operation. So far then as abdominal hysterectomy goes, it seems to be sufficiently safe to warrant us in recommending it to the patient as a means of restoration to health.

Approaching the question from another direction, let us ask : Is it better to operate upon fibromas early or late—better when they are small, and have caused a minimum loss of health, or after they have become large, and have caused such local and general damage as to make their presence a question as much of life, perhaps, as of health.

I think that we are prepared to admit that in this matter of health, early operation is desirable. Can we not say then, that in the matter of chance of life, because of improved methods of operating, and the absence of severe health deterioration, early operation is the best? I believe it is.

It is interesting to note that in this case we are facing the same problem that occurred in the history of the removal of ovarian tumors, and I believe that the solution will be the same in the one as in the other, namely, that both in the matter of restoration to health and securing of prolonged life, early operation in fibroids will come to be the rule.

A Minute Perforating Ulcer of the Appendix.

Dr. POLK also presented an appendix vermiformis, which he had removed from the patient six weeks ago. The specimen was of interest for the reasons which would appear as he narrated the case.

The patient was a young girl, nineteen years of age, in all respects healthy, suffering from dysmenorrhœa. Last spring the abdominal pain, instead of being general over the whole hypogastrium, as heretofore during menstruation, became central over the right iliac fossa, upper portion. Menstruation existing at the time clouded the diagnosis, but the presence of temperature pointed to the intestine as the chief source of evil. Under rest and poultice recovery occurred, and nothing beyond the general monthly dysmenorrhœal pain presented itself in the case until six weeks ago, when there was a repetition of last Spring's attack. Appendicitis was diagnosed, and the operation made. The appendix normally lay behind the cæcum, nearly all of it being intimately connected with the mesocolon, and therefore resting against the iliac fossa and lumbar region; in other words, the appendix was doubled back behind the cæcum (normally). As the abdomen was

opened, the evidences of peritonitis were at once seen. Projecting from the end of the cæcum was the appendix, about half an inch of it hanging in the abdominal cavity, and the remainder, three inches, united with the mesocolon as already described, and extended well up near the inferior border of the right kidney. The evidences of inflammation were best marked along the line of the appendix. It was tied off close to the gut, the stump being treated by approximating the peritoneal surfaces. The appendix was then dissected from its position and removed. At the extreme end an opening not larger than the head of a pin was discovered, and laying open the cæcum, a round, perforating ulcer, about the size of a pea, came into view. There was no concretion in the appendix, no evidence of sloughing, simply the perforating ulcer. The location of the ulcer would probably have converted the inflammation ultimately into an incapsulated abscess, but the immediate interest lay in the fact that the inflammation upon the interior of the appendix was catarrhal, and yet at the extreme extremity was this perforating ulcer occurring without the presence of any foreign substance. It is perhaps well to add that there was no constriction beyond that of the recently swollen mucous membrane, and, therefore, there could have been no question of prolonged retention of products in the deeper portions of the appendix.

The patient made a good recovery.

Abscess of the Broad Ligament Following Lymphangitis.

Dr. POLK wished to make a report upon a case operated upon by him two weeks ago yesterday.

The patient was an Italian woman, confined five weeks prior to the date of operation. Following the confinement, there had been puerperal fever of a moderate type. The precise clinical history could not be obtained, but it appeared that the case was one of continued fever with intermissions, rather than one of frequent and irregular chills with wide ranges of temperature. She was syphilitic, in the second stage. Physical examination revealed a uterus which had undergone involution fairly, it being three and three-quarter inches deep. In intimate relation with the upper half of the body of the uterus on the left side was a mass apparently the size of a hen's egg, which extended towards the pelvic brim of the same side but did not reach it by about one-half inch. Upon the right side was a similar mass, but with much broader attachments, extending along the side of the body of the uterus

from internal os to cornu. This mass was apparently double the size of the one on the left and reached the right pelvic wall. The posterior region of the uterus was free, that is, Douglas' *cul-de-sac*, and all the region between the rectum on the left side and the mass on the patient's right, that is, the lower posterior region of the pelvis, was free of mass or tumor of any kind.

Opening the abdomen, the case was found to be one in which the fimbriated extremities of both tubes and both ovaries were free from any displacement, both fimbrias being open. Between the layers of the broad ligament on the right side filling all the space between the uterus and the ovary, and even extending beyond, was a mass of inflammatory exudation. Its limits were the Fallopian tube and round ligament above, the right wall of the uterus within, below and to the outside an irregular line which corresponded a good part of the way to the base of the broad ligament and, then turning upward, reached the upper border of the broad ligament near the pelvic brim. From before backward, it was about one inch in thickness, measuring from the anterior face of the broad ligament to the anterior face of the ovary which about corresponded to the central line of the mass. Upon the left side an inflammatory exudate of about the same consistency, but much smaller, was found. Its limits were the Fallopian tube and broad ligament above, lateral aspect of uterus within, below and without a line drawn from about the lower third of the uterine body to the ovarian attachment to the broad ligament. In other words, it was confined to that triangular space of the broad ligament just below the cornu of the uterus.

With some difficulty, the masses were dissected from their position and removed, the ovary and tube of both sides being, at the same time, taken along with it. Supposing that I had to do with an instance of salpingitis in which there had been occlusion of the tubes before the infundibula was reached, with subsequent distention and rupture of the contents of the tube into the region between the folds of the broad ligament, I laid open the tubes for minute examination. To my surprise, I found that the lumen of the tube was free from anything more than a mild catarrhal inflammation, from one end to the other. There was parenchymatous thickening of the tube walls, most marked, of course, on the right side, but the tube cavity was as I have said. Cutting into the mass, I found it to be an abscess with thickened walls without connection with either tube or ovary, neither ovary presenting anything more than some slight thickening from serous infiltration.

The case was one, then, of abscess, situated between the folds of the broad ligament. Originally a lymphangitis, there had evidently been considerable exudation between the folds of the broad ligament, high up. This had subsequently broken down, and an abscess formed.

Dr. POLK reported the case for the reason that it was the single case of pelvic abscess in which the origin of the abscess was clearly intra-ligamentous,—in which the abscess was clearly the result of a cellulitis—which he had seen in his entire experience as an operator in the pelvic disorders of women. In every other instance, the origin of the disease has been either the ovary or the tube. As he had occasion to say before, his experience led him to believe that the exudation associated with lymphangitis resolved with the substance of the septic infection or else the case terminated fatally before the abscess formation took place.

He was aware that he was opening up a wide question, but the opportunity for putting the case on record, as a single instance of abscess of the broad ligament clearly following cellulitis, could not be resisted.

He believed that resolution would have occurred here but for the syphilitic taint.

DISCUSSION.

Dr. W. GILL WYLIE said that he would not consider the case just reported by Dr. Polk as one of cellulitis but rather one of lymphangitis, which had simply resulted in an abscess in that particular locality. True, it was in the cellular tissue but he thought the cellular tissue would not have been involved had it not been for the lymphangitis. He had seen several such cases all occurring within a few weeks after labor or abortion. He was satisfied that in quite a number of cases of so-called "milk-leg," if the early history could be ascertained, it would be found that most of them gave a distinct history of the poison starting in the uterus and subsequently extending to the veins of the leg.

He agreed with Dr. Polk as to the advisability of performing abdominal hysterectomy for small fibroids. If he could diagnosticate a pelvic tumor as large as his fist, or larger, no matter what the symptoms might be, he invariably advised at least an exploratory incision. Of course, there are masses such as those resulting from a localized peritonitis with effusion, which may be mistaken for true tumors, but he referred to cases where a clear diagnosis of a fluid tumor or of a new

growth had been made. Once having made sure of his diagnosis he always advised operation.

Dr. W. T. LUSK said that he had never seen a case with a small fibroid in which the patient suffered much from pain and hemorrhage which had not been entirely relieved of all the symptoms by simply removing the ovaries and tubes, and therefore he did not feel called upon to resort to a more serious operation.

Dr. R. A. MURRAY asked if a lacerated cervix was also present in the case of abscess in the broad ligament, because he thought this an important element in connection with the case. In three puerperal epidemics which he had observed, he had noticed that in many cases of laceration of the cervix there would be an exudation into the broad ligament in spite of antiseptic treatment and a comparatively easy convalescence, and in spite too of the fact that there had been no foul-smelling discharge. He believed that in these cases the infection extends directly from the lymphatics of the cervix and not through the uterus or the tubes. In the other cases where the endometrium is involved and then the tubes, we do not find small abscesses at the side of the uterus but large intra-peritoneal abscesses. This is important, for if a correct diagnosis be made in time purulent infection may be prevented from going through the uterus and tubes.

Regarding the position taken by one of the speakers that the abscess in the case reported was due to a phlebitis, it should be remembered that the infectious matter passes first through the uterine sinuses and then involves the vein, producing a general purulent infection, so that in phlebitis the history is very different from that of an ordinary puerperal peritonitis. There is usually great prostration, a comparatively low temperature and vomiting as an early symptom; but it is not the greenish vomit of peritonitis. In the other class of cases we find intense fever, delirium and tenderness on either side.

Adenomatous Hyperplasia of the Body of the Uterus.

Dr. A. PALMER DUDLEY reported such a case. The specimen was removed from a woman sixty-eight years of age, who had been an invalid for five years. She had been treated for various conditions previous to coming under his care. An odorless discharge of mucus and an occasional drop of blood, and pain in the back, were the only symptoms. About eight weeks ago he curetted the uterus, and an examination of the material removed at that time made by Dr. Freeborn showed the condition to be one of adenomatous hyperplasia of the body of the uterus. The curetting and washing reduced the size of the

uterus quite markedly. The condition steadily progressed however, the growth returned, and three weeks ago he performed vaginal hysterectomy. After the operation the temperature did not rise above 100° and the patient made a rapid recovery.

Dr. DUDLEY also exhibited some material which he had removed by curetting from a patient weighing two hundred and fifty to three hundred pounds, who had had profuse menstruation for about a year and had only received medicinal treatment. The uterine sound showed the uterus to be occupied by some growth, and he had accordingly removed this material with the curette in order to facilitate the diagnosis. After curetting, the uterine cavity was packed with gauze. During the operation of curetting continuous irrigation with a 1-5000 bichloride solution was kept up.

Hydrosalpinx with a Long Pedicle.

Dr. DUDLEY also reported such a case with the following history:

He intended at the outset to do a vaginal hysterectomy but found the hydrosalpinx so adherent that it was necessary to perform abdominal section before removing it. During the laparotomy he tied off what he supposed to be simply an adhesion to the lower edge of the omentum on the opposite side. The latter part of the operation was performed somewhat hastily owing to the fact that a colleague was waiting to make use of the room in which he was operating. On this account he overlooked the true nature of the supposed adhesion. After about forty-eight hours the patient suddenly developed a rapid pulse and, although there was no evidence of bleeding, as shown by the drainage-tube, she sank rapidly and died of heart failure shortly afterwards. The autopsy showed, on lifting up the omentum, another very large hydrosalpinx containing about six ounces of fluid. This tumor also had a long pedicle, and it was found at the examination that a portion of the tube only had been removed. This hydrosalpinx was pressing directly on the solar plexus, and this may have had something to do with her death. There was also a moderate degree of acute parenchymatous nephritis, but there was no evidence of peritonitis, the abdominal cavity was perfectly dry, and there were no intestinal adhesions.

A Cyst of the Broad Ligament—Cæliotomy—Hemorrhage from the Accidental Removal of a Ligature with the Gauze Packing.

Dr. W. T. LUSK reported this case as follows:

E. S., aged twenty-three, married, admitted to Bellevue Hospital, January 11th, 1893. She was married two years ago. A child was born in November, 1891. Since then she complains of menstruation lasting

from ten days to two weeks and attended with great pain, of profuse leucorrhœa tinged with blood and of sharp, lancinating pains in the womb.

When admitted to the hospital a small, fluctuating tumor could be felt posterior and to the left of the uterus, which rapidly increased in size, pushing the uterus upward and forward and filling the space between the rectum and vagina. The fluid contained in the cyst, as determined by the aspirator, was clear and colorless. Cœliotomy was performed on Thursday, February 9th, 1893. A cyst the size of a large orange was attached to the left broad ligament. The left tube was greatly thickened. Beneath and between the folds of the broad ligament there was a second cyst with thick white walls. In the removal of the diseased tissues it was necessary to ligate the broad ligament in sections. A strip of iodoform-gauze was inserted in the lower part of the abdominal wound before closure was completed. Two days later the gauze was found to be dry and I withdrew it gently. To my dismay arterial blood poured out of the opening. In a few seconds I withdrew a couple of stitches and packed the seat of hemorrhage with gauze. The bleeding was instantly arrested. The patient had an attack of syncope from loss of blood, but it rapidly disappeared and the subsequent convalescence has been uneventful.

In this instance it was evident that the gauze had adhered to the ligated portion of the broad ligament and that its removal was attended by the detachment of one of the ligatures.

Practical Observations on Abdominal Surgery.

DR. W. GILL WYLIE read the paper of the evening with the above title.
(See page 293.)

DISCUSSION.

Dr. G. M. EDEBOHLS said that he did not think any particular season of the year was more unfavorable than another for a surgical operation, and if the author had seen sepsis more in March than at any other season of the year, it was simply a matter of coincidence.

He thought we could all agree on the subject of localized acute peritonitis, and that as soon as we could find the best route for reaching the localized collection of pus, it was best to evacuate the abscess. He thought however the author presented altogether too favorable a picture of the surgical treatment of acute general peritonitis. He had cited a number of cases of acute general purulent peritonitis following appendicitis in which he had operated. He could not but envy the

author's condition of mind which enabled him to approach these operations with certainty in his mind as to just what procedure should be adopted, for the majority of surgeons, he believed, were very uncertain as to what should be done; they had no invariable rule of procedure and were compelled to treat every case individually. Four or five years ago there was much puerperal septicæmia in the vicinity of St. Francis' Hospital, and consequently many of the cases reached his service there. Many of these were examples of acute general peritonitis and he performed a number of laparotomies upon them. He found that when he could evacuate the localized collection of pus, even when symptoms of sepsis were severe and whether or not he proceeded through Poupart's ligament or through the abdomen, the cases as a rule recovered; but of at least five or six cases of acute purulent general peritonitis following abortion or labor in which he had performed laparotomy every single one terminated fatally. There is another class of acute purulent peritonitis—those due to leakage of pus tubes or rupture of an ovarian abscess. The operative treatment of such cases is usually successful, but when the peritonitis becomes general it is almost as hopeless as a case of purulent peritonitis.

Dr. A. H. BUCKMASTER said that while assistant surgeon at St. Peter's Hospital he had looked up the question of the comparative results of operations in summer and winter, and he had found that not only was the comparative mortality lower in summer, but the healing of wounds in general was more satisfactory. Since then he had seen nothing to make him alter his views on this subject. The records of this hospital showed that in March they had the greatest number of cases of erysipelas and also the few cases of tetanus which occurred, and this fact had become so notorious that some of the surgeons postponed their operations, as far as possible, until another month. He thought the season influenced the healing process just as it has a marked effect on scarlet fever; when the windows are thrown open, it is well known that epidemics of scarlet fever begin to abate.

Dr. J. DUNCAN EMMET said that the author's views that certain seasons were more favorable to operations than others did not strike him as at all frivolous, for all those connected with the Woman's Hospital knew that March and April had long been considered unfortunate months, not only for abdominal cases but for plastic surgery. It had also been noticed that sepsis was more apt to occur at this time and that when sepsis did occur at this season it was not uncommon to find it also in a neighboring lying-in institution.

Dr. H. T. HANKS agreed with the author that the summer months were not the worst months for operation. During the past summer in his private sanatorium he did a major operation every week during July and August and had obtained exceedingly satisfactory results. He was aware that at the Woman's Hospital there had long been a suspicion that March and April were not good months for operations, but he could not speak definitely upon this point from his own experience. He doubted however whether he had had more failures during these months than during December and January. It might be, as suggested in the paper, that some of these troubles could be attributed to less attention being paid to the garments of the attendants during the winter than during the summer months; still he did not think it was necessary to pay very much attention to any particular season of the year in which an operation was to be performed. The speaker said that he had seen no mishap follow from his practice of going directly from septic cases to laparotomies and confinements; it is a question of personal cleanliness and the proper use of germicides. If we immerse our hands for a few minutes in a solution of oxalic acid he thought there was little danger of carrying septic material to our cases. He believed that, providing we could detect purulent collections, we should perform abdominal section immediately, and he would not delay operation because of the existence of the morphine habit. He had only recently done an operation on a patient who in the eight days following the operation had managed to consume two ounces of opium which she had concealed under her pillow, and yet her convalescence was satisfactory. If we find pus in the general peritoneal cavity, whether of puerperal origin or not, he believed we should open the abdominal cavity, and he felt confident that as this practice became more general many more cases would be saved than at present. He thought that many medical men who expect to cure nine out of ten cases of idiopathic peritonitis without an operation would be surprised to learn that the author felt pleased at saving four out of five by means of operation. We should not forget our therapeusis.¹

Dr. LUSK said that he had formerly held the opinion that operative cases did not do well in summer, but last summer after lecturing on a case which he thought illustrated this point very well, the patient informed him confidentially that she had syphilis. This of course explained the sluggishness of the healing process in her case. Laparotomy certainly gives the best prospect of success where there is a

¹ The author referred to cases of general septic peritonitis.

purulent collection in the abdominal cavity. But puerperal septic general peritonitis is an exceedingly fatal disease whether or not abdominal section be performed, unless it is the result of a pus tube which can be removed, and so remove the cause of the trouble. A septic peritonitis in these puerperal cases ordinarily is only one feature of the septicæmia; the streptococci attack the red corpuscles and destroy them, and this causes death in spite of abdominal operation.

Dr. POLK thought the author had permitted certain of his recent experiences to eclipse his earlier ones, for he could very well remember that when they were both internes in Bellevue Hospital they had object lessons in the way surgical cases behaved which satisfied them thoroughly as to the innocuousness of surgical interference, regardless of the season of the year. The custom of closing one of our hospitals in the summer season he thought had had much to do with prejudicing the profession against operations in the summer season.

Regarding the treatment of general peritonitis, he agreed with Dr. Edebohls that after the disease had become general, especially if of that variety which originates in the appendix, very little can be done to save the patient. The author had not made sufficiently clear the necessity for impressing upon every one the fact that the only time an operation is of service in cases of peritonitis is before general infection has occurred, especially if the peritonitis originates in the appendix or is of puerperal origin.

Dr. A. F. CURRIER could not understand why we should admit that climatic influences affect well persons but not the sick. How is it that changes of temperature so markedly affect the well and yet do not affect those who have been subjected to severe operations, particularly if shock be present? He saw no reason why certain meteorological conditions may not affect surgical treatment unfavorably just as we are susceptible to epidemic influences.

He indorsed what had been said about the general hopelessness of abdominal operations in cases where sepsis is general, and he thought this also was the position taken in the paper. It was perhaps a question whether it is not better in the interests of good surgery not to interfere in cases where sepsis has existed for some time and where laparotomy will most probably precipitate a fatal termination.

Dr. H. L. COLLYER thought it hardly fair to compare the statistics of to-day with those of the past. With the surroundings found in Dr. Wylie's cases sepsis should not occur. Operating in hospitals is very different from operating in private houses, particularly in tenement-

houses, where the numerous flies may be the means of spreading infection. He thought it made very little difference in what month an operation was done, provided proper antiseptic precautions were taken. As soon as general peritonitis is discovered, if pus be present, we all agree that it should be evacuated; but the trouble is that it is difficult to discover just when there is purulent matter and when only inflammatory exudation. In cases of localized purulent peritonitis, the proper course is operation.

Dr. JOSEPH BRETTAUER had been surprised at the author's statement that in thirty cases of injury to the intestines where suturing was difficult, he simply introduced a large tube into the rectum and made no attempt to suture the gut. This is not a safe practice, and with the Trendelenberg posture one should be able to introduce the necessary sutures.¹

Dr. WYLIE, in closing the discussion, said that those familiar with the history of the old puerperal epidemics in Bellevue Hospital knew that they were invariably more frequent in the Spring than at other times of the year. Notwithstanding that he is careful to secure asepsis, he has not yet succeeded in passing through this period of the year without one or more cases of infection, so that it is not enough to be simply clean and endeavor to secure aseptic conditions.

Personally, he did not believe in idiopathic peritonitis, and modern pathologists he thought do not recognize such a condition. Abdominal surgeons frequently see cases of general peritonitis, yet they are not allowed to operate in the early stages when the patient is in good condition. He had operated on eight cases where there was pus with the result given in the paper, and we should not therefore say that these cases are hopeless, for his statistics do not support this view. No matter how bad the case, if there is any chance of saving life by operation, then he believed in resorting to it. There may be puerperal cases where it is useless to operate, but he knew of no method offering any better chance. It is utter nonsense to say that there is any special difference between peritonitis arising from suppuration around the appendix and peritonitis from other causes; the only difference is that the peritonitis from the appendix is apt to be much more virulent than that from a ruptured tube. The principles of treatment however are the same in both conditions.

¹ The author referred to injuries of the sigmoid flexure or rectum which were very deep in the pelvis.

THE STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M. D.

The Differential Diagnosis of a Ruptured Ovarian Cyst in the Gravid State from Rupture of an Extra-Uterine Sac.

Dr. ROSENSTEIN (*Centbl. für Gyn.*, 1892, No. 41) reports a case in which rupture of a carcinomatous papillary cyst of the ovary took place in a woman who was in the fifth month of pregnancy. As the patient had been quite well until the sudden onset of alarming symptoms the night before, it was thought probable that a rupture of an extra-uterine sac had occurred. Cœliotomy was done and the ovarian tumor removed. The uterus was found to contain the products of gestation. Abortion took place a few days afterwards. The absence of acute anæmia and discharge of blood from the uterus the author thinks is sufficient in a similar case to exclude extra-uterine gestation.

Asepticism in Cœliotomy.

Dr. M. MIRONOW (*Centbl. für Gyn.*, 1892, No. 42) with the view of ascertaining the possibility of doing aseptic work in abdominal sections without the use of antiseptics, made a number of bacteriological experiments in Prof. Fritsch's clinic. The investigations were made on thirty-one cases operated on by Fritsch and the results are given in tabular form. Some of the abdominal contents, especially that from the field of operation, were taken at the commencement and end of the operation. The air immediately surrounding the incision was also subjected to bacteriological examination. Micro-organisms were present in twenty out of twenty-eight cases that were examined at the end of the operation. None were detected in twenty-one out of twenty-three that were examined at the commencement of the operation. The organism found was the micrococcus cercus albus and probably came from the air and the beards and heads of the operator and assistants. That this organism has pathogenic properties is more than probable, for in the fifteen cases in which it was found eleven showed elevation of temperature on the day following the operation. The abdominal cavity of itself contains no micro-organisms, as was substantiated in the twenty-one cases stated above. Of twelve cases of

adhesive peritonitis there were found none in eleven, thus supporting the view that adhesive peritonitis is caused by mechanical or chemical irritation and not by micro-organisms. [It must be stated that although no antiseptics were used within the abdominal cavity and in the treatment of the abdominal wound in the above cases, antiseptics were freely used in the preparatory toilet of the patient, operator and assistants. The instruments also were placed in a two per cent. carbolic acid solution. Hence it can scarcely be said that it was aseptic work pure and simple.]

The Simultaneous Occurrence of Carcinoma in the Cervix and Body of the Uterus.

J. PFAUNENSTIEL (*Centbl. für Gyn.* 1892, No. 43) agrees with Hofmeier that double carcinoma of the uterus is very rare. In most cases described as such the multiple growths were metastases, and a connecting link could be found. In a case coming under the author's observation, there was a carcinomatous growth in the posterior wall of the cervix and several small nodules in the walls of the body of the uterus. The endometrium was the seat of papillary adeno-carcinoma. This was looked upon as the primary disease and the growths in the cervix and nodules in the body as metastases. The question of double carcinoma of the uterus has a vital bearing upon treatment. The advocates of total extirpation justify their course by the statement that it is of frequent occurrence. But those in favor of high amputation claim that it is exceedingly rare. The latter, however, make a distinction between a carcinomatous growth in the cervix and a malignant affection of the cervical mucous membrane. The last they consider as an indication for total extirpation from the tendency of the process to travel upwards.

Operations on Carcinomatous Uteri.

TIPJAKOFF (*Centbl. für Gyn.* 1892, No. 43) reports fifty cases of uterine cancer operated upon without a death. In thirty-five cases the disease affected the cervix, in twelve the body of the uterus, and in three there was involvement of the uterine cavity. Amputation of the vaginal portion was done in five cases, the high amputation in twenty-five, and total extirpation in twenty cases. When the carcinomatous growth has affected the whole of the cervix he is in favor of total extirpation. He commences at the sides, then in front, and leaves the opening of the posterior vaginal vault to the last. He

does not retrovert the uterus but draws it downwards after it has been freed. He uses silk sutures and ligatures exclusively. The vaginal wound is never sutured, but is tamponned with iodoform-gauze which is changed on the fourth day.

Intra-Uterine Therapeutics.

MACKENRODT (*Samml. Klin. Vorträge, n. f.* No. 45.) relates his experience for a period of two years with curettage and intra-uterine injections. The results of forty-five cases occurring during the last half year are given somewhat in detail. Of these, seventeen cases were cured, twenty-two were improved, five were made no better and withdrew from treatment. The patients were treated for the most part in the ambulance service, and the injections were made at first every other day, but later on only twice weekly. According to the author, all affections of the uterus or of the adnexa which commence primarily as an endometritis should be treated with intra-uterine medication. But the acute stage must be over. Affections of the adnexa and their surroundings are not contra-indications of intra-uterine treatment as is held by some; on the contrary they are indications for the treatment, only one should be careful in carrying it out not to dislocate the uterus. Intra-uterine treatment is indicated in the following affections: Endometritis, metritis, and peri-metritis chronica, parametritis and parametritis posterior chronica, oöphoritis and peri-oöphoritis subacute and chronic. In cases of pyo-salpinx and purulent ovarian tumors the treatment is of no avail.

Symphysiotomy.

P. ZWEIFEL (*Centbl. für Gyn.* 1892, No. 44) reports a case. The patient, a IV-para, gave birth to only one living child prematurely at the eighth month. At the time of operation gestation had gone to full term and the waters had broken thirty-six hours before. The measurements of the pelvis were Sp. twenty-six, Cr. twenty-eight, Tr. thirty-one, c. ext. seventeen, c. diag. ten. There was but little hemorrhage until the lig. arcuatum was cut through. Then there was very full venous oozing which was arrested only after extraction of the child with considerable difficulty. Deep sutures under the guidance of a finger in the vagina were necessary. The child deeply cyanotic was resuscitated but died on the fourth day of pneumonia. The woman made an excellent recovery and could walk with ease on the nineteenth day. The separation of the symphysis occurred to the extent of 6.5 cm.

Diagnostic Value of Electricity.

APOSTOLI (*Centbl. für Gyn.* 1892, No. 44) states that the faradic current can differentiate between an hysterical ovaralgia and an inflammatory affection of the adnexa. In the first the current will relieve the pain, while in the second it will be of no value. Intra-uterine application of the galvanic current will indicate whether the adnexa are diseased or not by the degree of tolerance. He concludes as follows:

1. Every uterus that tolerates a galvanic current of one hundred to one hundred and fifty milliamperes has a healthy periphery, or at least for the time being there is no inflammation of the adnexa. A simple ovarian cyst does not affect the tolerance.
2. In every instance when the uterus does not tolerate a current strength of fifty milliamperes, and pain or fever follow, the condition of the adnexa is suspicious.
3. If the pains diminish in subsequent applications, then hysteria is present or a retrogression of an inflammatory condition of the adnexa has taken place.
4. If the intolerance increase and if fever set in, then there is present a purulent oöphoro-salpingitis which calls for castration.

Arsenic in Gynecological Practice.

Prof. L. KLEINWÄCHTER (*Der Frauenarzt*, October, 1892) draws attention to the great value of arsenic in the genital diseases of women associated with or dependent upon mal-nutrition, general debility, or neurasthenia. It is especially of service when chlorosis and anæmia are present. He has given trial to all the different arsenical mineral waters, and places most faith in the Srebrenizer Guberquelle. This is given in tablespoonful doses twice daily, and the dose is increased by a tablespoonful every other day until the patient is taking from five to six tablespoonfuls. He thinks he has found arsenic of value in delaying the recurrence of extirpated sarcomas and carcinomas. [In this country one cannot say as Kleinwächter says of Germany that arsenic is seldom given excepting in psoriasis and certain forms of malaria. We think the profession here appreciate the efficacy of the drug in the various forms of mal-nutrition and in conditions of defective blood formation and in various other forms of disease.]

H. LOHMANN (*Der Frauenarzt*, January and February, 1893) with the motto of "There is an absence of pike in the Gynecological carp-

pond," arraigns the gynæcologists of the day for their craze to do operations on the female genitals. He thinks the craze to remove ovaries by the wholesale has somewhat abated from the exhaustion of the material, but the craze to remove the uterus by total extirpation is being substituted. He believes that ere long the whole medical profession will raise its voice in protest of the bloody tendencies of their gynæcological brethren, and that methods not calling for mutilation and robbing of the woman's generative organ will become popular.

Cæsarian Section and Deep Incisions of the Cervix in Eclampsia..

OTTO V. HERFF (*Muench. Med. Woch.*, 1892, No. 44) in an able article endeavors to point out the indications in eclampsia for Cæsarian section and for deep incisions according to Dührssen. He differs from Dührssen in the opinion that deep incisions are comparatively free from danger. The dangers are hemorrhage, injury to the parametrium and the tendency of the tear to extend up into the uterine tissue under the force employed to extract the child.

ABSTRACTS.

Diseases of the Eye in Gynæcological and Obstetrical Practice.

Dr. A. MAITLAND RAMSAY read this paper and gave lantern illustrations. He drew attention to the frequent association of eye-symptoms with functional changes in the female genital organs. (1) With the establishment of menstruation certain eye diseases attain their maximum of frequency; for example, inflammations of the cornea, of the sclerotic, of the iris and choroid, and even of the optic nerve and retina; though, for the most part, this was to be regarded as coincident with, rather than dependent upon, the occurrence of menstruation. Defects of visual acuteness and contraction of the field of vision had been noticed during menstruation. Frankelstein had shown that the limitation in the field of vision began two or three days before the onset of the flow and reached its greatest intensity on the third or fourth day of menstruation. The color sense was also-

disturbed, especially for green, 20 per cent. losing it. Vicarious menstruation had sometimes occurred into the eye. Lawrence had recorded a case. Effusion of blood into the vitreous at the climacteric period was not uncommon. He mentioned the amaurosis menstrualis and the ophthalmia menstrualis of the old writers, and gave two theories of causation, reflex and toxic, with illustrative cases. (2) In frequency the most important group of eye affections was dependent upon or associated with retinitis albuminurica. He divided them into two classes: (a) Complete blindness for the time being, with no gross retinal lesions. (b) Those without visual defects, but with characteristic lesions of the optic nerve and retina. In the latter the defect was more or less permanent and, if complicated with uræmic poisoning, might pass into complete blindness. He gave illustrative cases. In the albuminuric retinitis of pregnancy one eye only might be affected. Separation of the retina might occur during pregnancy by itself, or along with albuminuric retinitis. The prognosis was more favorable than in ordinary circumstances. During the puerperal state embolism of the central artery of the retina with sudden and complete blindness had occurred. The patients as a rule had died with all the signs of pyæmia. After severe *post-partum* hemorrhage, marked diminution of vision, followed by atrophy of the optic nerve, had occurred. Ophthalmia neonatorum was dealt with at some length. More than one-tenth of all the cases of blindness were due to it. He dwelt strongly on the prophylactic treatment, which had reduced the percentage in Leipzig Lying-in Hospital from 7.5 per cent. to 0.5 per cent. The curative treatment advocated was thorough and frequent cleansing with 1 to 10,000 corrosive sublimate or saturated boracic acid solutions, and brushing once a day with two to four grains to the ounce of silver nitrate. If ulceration had occurred atropine or eserine should be applied, the former if the ulcer were central and the latter if it were peripheral. If the ulceration were severe a compress or bandage should be applied. (3) During lactation atrophy of the optic nerve occurred when there had been a rapid succession of children. Functional disturbances were common, and most marked in hypermetropic women. Episcleritis he had seen occur when the patient had been enfeebled by prolonged lactation. The child sometimes scratched the mother's cornea, and he had found these cases difficult to heal.

In the discussion which followed, the President, Drs. Reid, Ameron, Richmond, Gunn, and Howie took part; and Dr. Ramsay

replied. (Trans. Glasgow Obstet. and Gyn. Soc.)—*British Medical Journal*.

Effects of Morphine on the Female Organs.

PASSOWER (*Centralbl. f. Gynæk.*, No. 2, 1893) recently read a paper before the Obstetric Society of St. Petersburg, in which he related the course of two cases under his own observation. It confirmed an opinion, already supported by the observation of others, that the abuse of morphine eventually leads to atrophy of the female organs. Passower's cases were of the ages of twenty-nine and thirty. One consulted him on account of the resultant amenorrhœa. The drug was discontinued, and the catamenia reappeared. The patient took to morphine again, and straightway the menses ceased. Between 1887 and 1889 Passower observed the case; sixteen pounds weight was lost, and the subcutaneous fat disappeared. The vulva atrophied. The measurements of the uterus during that period ran as follows: December, 1887, $3\frac{1}{10}$ inches; May, 1888, $2\frac{2}{10}$ inches; November, 1888, $2\frac{7}{10}$ inches; April, 1889, $2\frac{3}{8}$ inches; September, 1889, $2\frac{3}{10}$ inches, and July, 1890, $1\frac{2}{10}$ inches. The atrophic process no doubt began in the ovaries and spread to the other parts of the genital tract. This is evident from the early appearance of amenorrhœa and the later atrophy of the vulva, and also from physiological evidence; thus the submaxillary glands atrophy in dogs subjected to doses of morphine. How much of the drug can be taken without danger of these ill effects is entirely an individual question.—*British Medical Journal*.

Hernia of the Fallopian Tube.

LEJARS (*Revue de Chirurgie*, January 1893) recently operated on a woman, aged 39, admitted into hospital with strangulated right inguinal hernia. The abdomen was distended, the temperature over 102° , a bloody discharge was present, and a fibroid of the fundus of the uterus was detected. The sac contained a reddish foetid fluid, no omentum, and no intestine, but the tube was easily recognized by its fimbriæ. Pus escaped from the ostium, and the entire tube was sloughy. The internal ring was divided; then, and not till then, the tube could be drawn forwards, and its proximal, non-strangulated, portion brought to light. The healthy tissue was secured with catgut, and the mucosa touched with the cautery after section, in order to destroy septic elements. Then the stump was allowed to slip back

into the abdominal cavity. The ovary had taken no share in the rupture. In dissecting away the sac, the bladder was wounded. A urinary fistula remained for some time. Lejars has collected eleven cases of hernia of the Fallopian tube alone, eight clinically reported in full, one discovered at a necropsy, and two more are briefly noted. Whilst tubo-ovarian hernias are almost always inguinal, five of these purely tubal hernias were femoral. In five the rupture was on the right side, in four the side is not mentioned, in none is it said to have been the left. The youngest patient was thirty-six—the eldest seventy. This contradicts an old theory that such cases are congenital. In five cases there was acute strangulation; in one the rupture was irreducible and full of fluid; aspiration was followed by fatal peritonitis. A strangulated tube, not gangrenous, may of course be returned into the abdomen, as was done in Brünner's two successful cases; but Lejars' experience of pus in the tube in his case is never to be overlooked.—*British Medical Journal*.

Extirpation of Cancer of the Stomach.

Dr. DEFONTAINE (*Arch. Prov. de Chir.*, July 1892) reports the following case. The patient was a woman aged thirty-four, who commenced to suffer from stomach troubles in October, 1891. She first had attacks of flatulent dyspepsia and pain in the stomach at various times. In January, 1892, attacks of vomiting came on. They were not frequent, but were violent, and much material was ejected. These at first consisted of food, but lately the vomit has been of a chocolate color. This patient was seen on April 15, 1892, when a tumor was discovered in the left side of the abdomen and just above the umbilicus; it was rounded in shape, about the size of a kidney, and was perfectly movable: it could easily be moved from one side of the middle line to the other. A malignant tumor, probably in the wall of the stomach, and without important adhesions to neighboring structures, having been diagnosed, on May 1st the patient was chloroformed, and an incision was made in the linea alba. On examining the abdominal cavity, a tumor was felt on the left of the incision. It was globular in shape, smooth, about the size of an apple, its surface covered with injected blood-vessels, and it was apparently situated in the wall of the stomach, since attached to its lower border there was the great omentum. Above, it was fixed to the anterior surface of gastro-hepatic omentum. This adhesion was easily separated, but as this part of the omentum felt a little indurated, it was divided into two parts, ligatured

and removed. The tumor was then excised with scissors. The stomach was opened, and the finger being used as a guide, the separation was effected about one centimetre from the margin of the tumor. The mucous membrane bled considerably, but this was stopped with pressure forceps. The tumor was then removed, and then after the stoppage of hemorrhage and washing out the stomach, the margins of the wound in the stomach walls were brought together and united with a double row of sutures. The deeper row was passed through the mucous membrane and submucous tissue, and sometimes through the muscular coat. The superficial row was applied after Lembert's method through the serous and subserous coats. After this was done, the skin incision was closed, and dressings of iodoform-gauze applied. The operation occupied two hours and a half. The patient recovered, and on May 26 was well and had increased in weight.—*Gaillard Med. Jour.*

A New Method of Total Amputation of the Uterus.

Dr. HERZFELD describes a new method of removing the entire uterus which might be designated as sacro-extra-peritoneal. It consists in the resection of the coccyx and of part of the last sacral vertebra, the peritoneal cavity being carefully closed before the uterus is excised. This is the important point in the operation because by this means an extra-peritoneal amputation of the uterus is rendered possible and the infection of the peritoneum and adjacent parts by cancerous particles effectually prevented. After resection of the coccyx and of part of the last sacral vertebra, access is gained into the peritoneal cavity by opening the Pouch of Douglas. The uterus being drawn forward an incision is also made into the peritoneum at the bottom of the utero-vesical *cul-de-sac* and the anterior edge of this last opening is sutured to the posterior edge of the opening in the Pouch of Douglas.

Dr. Herzfeld and Prof. Schauta have performed six operations of this kind. The first case was that of a woman of forty-two, who was suffering from carcinoma of the posterior vaginal wall extending for about three centimetres (a little over one inch) above the os externum. The operation was done by Dr. Herzfeld who removed the whole uterus and the upper half of the vagina. The patient was able to get up eighteen days after the operation and is now perfectly well. In a second case the operation was performed for carcinoma of the body of the uterus. It lasted only forty minutes. In the course of the operation cancerous matter escaped through the vagina which would certainly have passed into the peritoneum had this not been previously closed. The third

case was that of a woman of forty-two, who had to be operated on for cervical cancer thirteen days after labor, at a time when the body of the uterus measured sixteen centimetres (about six inches) in length. Supra-vaginal amputation was out of the question for the lochia would have gained access into the peritoneum. The patient was able to get up a week after the operation. The parts united by first intention. Another patient who was very cachectic died of the condition of marasmus in which she was at the time of the operation. A fifth patient died of peritonitis which was proved to be independent of the operation. At the autopsy pyo-salpinx was found, the pus from which contained numerous streptococci. This shows that the peritoneal cavity should always be closed before the Fallopian tubes are interfered with.

Dr. Herzfeld believes that this operation is indicated (1) in cases where the uterus is too large to be removed per vaginam; (2) in cancer of the body of the uterus in order to avoid infecting of the peritoneum and (3) in cases of vaginal carcinoma.—*The Med. Week.*

On Ischio-Pubiotomy.

Dr. CHARPENTIER mentions, in reference to the communication made by Prof. Pinard at the last meeting of the Academy, the fact that an operation similar to Prof. Pinard's ischio-pubiotomy was described by Stolz under the name of pubiotomy. In this operation one of the pubic bones is divided subcutaneously with the chain-saw, close to the symphysis. Immediately this is done the two portions of bone fall apart and the distance between them may be increased almost at pleasure.

It is to Stolz, therefore, that the credit belongs of having devised this operation, Prof. Farabeuf's method being only a modification of that advocated by the father of French obstetrics.—*The Med. Week.*

Peroxide of Hydrogen as a Preservative against Syphilis and Soft Chancres.

Dr. Z. KROWCZYNSKI, Surgeon to the Lemberg Hospital (Galicia), has performed a series of very interesting experiments which consisted in the inoculation of patients suffering from syphilis or chancroidal ulcerations, in some cases with the unaltered pus from soft chancres and in others with the pus after admixture in a watch glass with the following solution: \mathcal{R} . Hydrochloric Acid, Mx; 3 % Solution of Peroxide of Hydrogen, $\mathfrak{z}\text{iv}$.

Dr. Krowczynski selected the peroxide of hydrogen for his experiments because of its powerful antiseptic properties and of its freedom from all caustic action. It was thought desirable to add a small quantity of hydrochloric acid to increase the destructive power of the fluid as regards the virus of the above-mentioned affections, previous researches having satisfied the investigator that the secretions from chancroidal and syphilitic sores are always alkaline in reaction. The addition of the acidified peroxide of hydrogen solution to the secretion from soft chancres always gives rise to a brisk effervescence.

The patients were inoculated on the forearm after carefully scarifying a limited area of skin with the point of a knife. The site of inoculation was first washed with soap and water and wiped dry after being rendered aseptic with a three per cent. solution of carbolic acid.

The results of the experiments have so far proved very satisfactory. Fifteen inoculations were made with the pure pus, all of which gave positive results, that is to say, on the third day after inoculation a small pustule appeared which soon became surrounded by a zone of inflammation. The pustule ran the usual course of typical soft chancres. On the contrary, out of fifteen inoculations with the pus after admixture with the peroxide of hydrogen solution, in fourteen the results were absolutely negative. In the fifteenth case, a patient suffering from late syphilitic manifestations, an ulcer formed at the site of inoculation on the sixth day but it presented none of the ordinary appearances of soft chancres.

Lastly, Dr. Krowczynski has had the opportunity of inoculating two medical men, who had never had syphilis and who volunteered to submit to the experiment, with syphilitic virus previously mixed with the acidified peroxide of hydrogen solution. The inoculations were made through the scarified skin of the forearm as before, in the one case with the secretion from a specific chancre and in the other with that of a mucous tubercle. The parts were not covered until they were quite dry, after which they were kept in cotton wool three days. In both cases the results were negative.

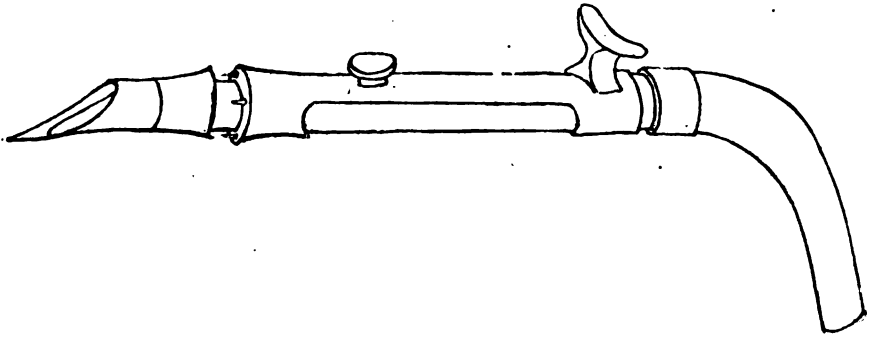
Although the facts observed by Dr. Krowczynski, as he himself admits, are far from being conclusive, owing to the small number of cases experimented upon, especially in respect of syphilis, we think that these experiments present sufficient interest to justify us in describing them at some length. The question is doubtless one of the greatest practical importance, for a very great advance would be made

in the prophylaxis of venereal diseases if the risk of infection with syphilis or soft chancres could be done away with by the external application of peroxide of hydrogen or some other fluid after a doubtful connection.

Dr. Krowczynski employed a comparatively weak solution (3 per cent.) because he was unable at the time to procure a more concentrated preparation.—*The Medical Week*.

NEW INSTRUMENTS.

We will publish the cut of any new instrument or surgical device of interest to gynecologists or obstetricians, giving the instrument-maker credit for producing the instrument on the following conditions: He must never part with the model from which the cut is made. This insures those who order the instrument that they will not buy one of the many modifications which always follow a successful invention. The second condition requires that the reproduction must have the endorsement of the inventor, or in case of a foreign instrument the authorization of one whose indorsement will guarantee its being of proper construction.

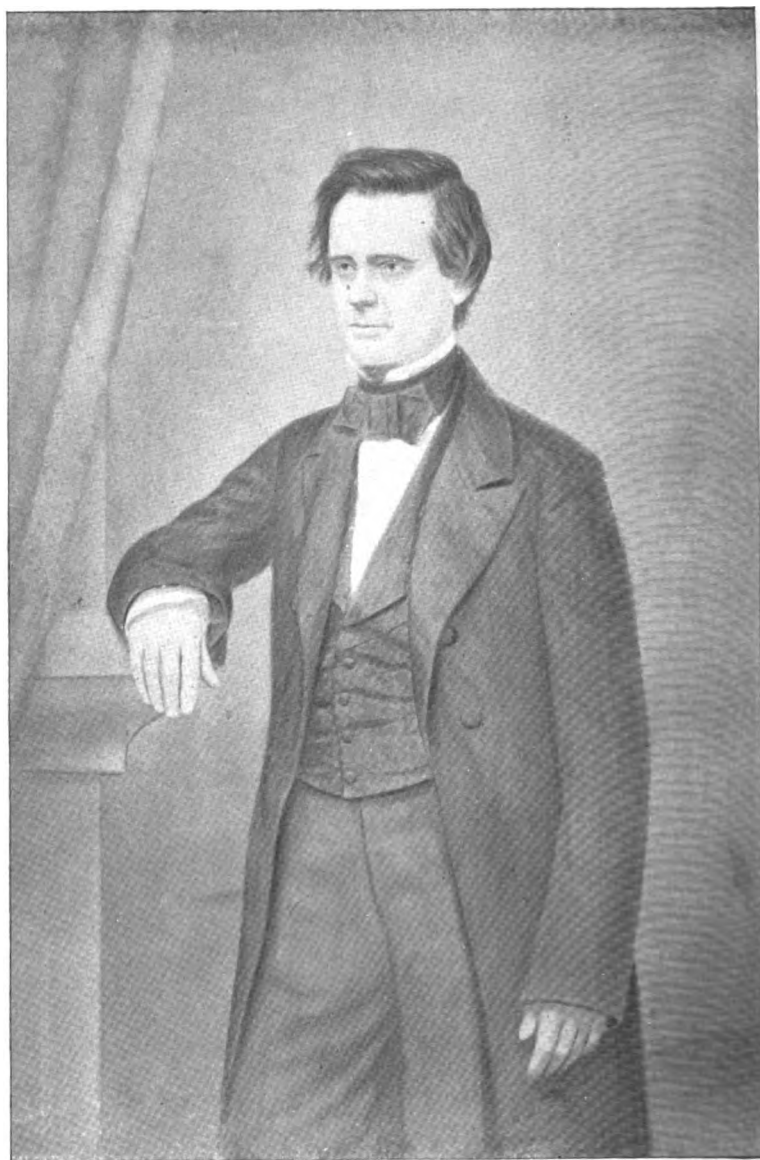


DR. J. D. BISSELL'S EXHIBITION OF TROCAR FOR TAPPING LARGE CYSTS.
(For description see page 316.)

Dr. Bissell's instrument is very ingenious and remarkably simple in construction. The extreme difficulty in removing a large cyst with a short pedicle and the danger of spilling cyst contents into the abdominal cavity, when the ordinary trocar is used, gives to such an instrument as Dr. Bissell's appears to be a most important role.

ANNOUNCEMENTS.

The next *sketch* in the SERIES OF EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA will be that of Dr. Paul F. Mundé with a portrait from a recent photograph.



DR. MARION SIMS,
1857.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

MAY, 1893.

REMINISCENCES OF THE FOUNDERS OF THE WOMAN'S
HOSPITAL ASSOCIATION.¹

BY THOMAS ADDIS EMMET, M. D.

In 1853 I lived in Fourth Avenue just above Twelfth Street, a locality then well up-town, since many of the wealthy people of the city still lived to the west of the City Hall and along Broadway. One afternoon in the Autumn, as I was walking with a companion on the outskirts of the city, we passed a solitary house standing on the east side of Madison Avenue between Twenty-Eighth and Twenty-Ninth Streets, and on the site of my present residence. The neighborhood was in that desolate transition-state between country and town, in which the picturesque domicile of the recent immigrant and the sportive goat are the most prominent features of the landscape. As I passed this house I read the sign of a physician then unknown to me. While commenting on such a situation for a physician the name attracted the attention of my companion who exclaimed: "Why, it is Dr. Sims who lived in Montgomery, Alabama! I do not know him very well but I have heard he was ill and would like to call." After ringing the bell and while standing at the door I noticed several vessels passing on the North River, in which direction the view was unobstructed. No other dwelling house was to be seen in the vicinity nearer than the

¹Read before the Alumni Association of the Woman's Hospital, January 18, 1893.

backs of a number on the north side of Twenty-Second Street and two old taverns on the Bloomingdale Road, on the present site of the Gilsey House and just beyond that of the Fifth Avenue Hotel. While in the parlor I recollect looking out of the back windows where quite a number of country-seats were to be seen towards the East River, with an unobstructed view of passing vessels and of the old Almshouse, which had recently been organized into the present Bellevue Hospital.

I was introduced to Dr. Sims who was a remarkably young-looking man and evidently in very bad health. I parted from him after a few moments with no expectation of ever meeting him again. In May 1854, a public meeting of the profession was called at the Medical College of the University of New York, then situated on Broadway and, I believe, nearly opposite Bond Street. The object of the meeting was to introduce Dr. Sims, who was to present a new method of curing vesico-vaginal fistula. The meeting was called chiefly through the influence of Dr. Valentine Mott, Professor of Surgery, Dr. John W. Francis, then a prominent practitioner of medicine, and greatly through the efforts of a much younger man, Professor Fordyce Barker, who was at that time president of the most influential medical body in the city, the New York County Medical Society.

The plan for establishing a Woman's Hospital had been freely canvassed by the profession, in advance of the meeting. The most uncompromising opponent was a Dr. Meredeth Reese, a free lance in the profession and a man with a grievance. He had recently been removed from the position of Physician-in-Chief of the Almshouse, and he wielded a certain amount of influence as editor of a medical journal then published in the city. He maintained that the field was too small a one for a special hospital. For he thought any one could apply nitrate of silver to an ulceration with a cylindrical speculum, that an astringent injection was all that was needed to cure a leucorrhœa, and "there was no difficulty in introducing Physic's globe-pessary for prolapsus." He thus summed up what he believed constituted the whole range of the diseases of women which needed special attention, and even these, he considered, could be quite as well treated in a general hospital.

But the meeting was held and, notwithstanding the opposition before it of a few persons, it proved a great success. It roused not only the profession to an endorsement of the necessity of a special hospital for women, but the public at large became quite interested in the movement. There seems to have been, however, no money



DR. MOTT.

forthcoming, and but for the persistent efforts of a few individuals the whole matter would soon have been forgotten. A new impulse was given by acting on the advice of Dr. Barker, that a committee of ladies be selected to take charge of the organization. I learned from the Doctor himself, a short time before his death, that the selection was left to him and was made from among his own patients with the single exception of his wife, whom the ladies themselves elected as their first Secretary of the Board. A representative man had been chosen from each of the medical colleges in the city, to form a Consulting Board of Physicians. Dr. Mott and Dr. Alexander H. Stevens were the Consulting Surgeons, and Dr. Delafield, Dr. Francis, and Dr. Horace Green the Consulting Physicians.

A dozen or more houses had been erected in the neighborhood referred to on Madison Avenue, shortly after my first visit to Dr. Sims. One of these, then known as 83 Madison Avenue, now 93, and on the present site of my private hospital, was taken on a short lease by the ladies of the Woman's Hospital Association. Their object was to obtain a place where Dr. Sims might demonstrate his operation for closing a vesico-vaginal fistula. For at first it seemed to many that there was more need of a special hospital for cases of fistula than for the special diseases of women, of which so little was then known. These facts I learned after I became connected with the organization. I was present at the meeting held in the Spring of 1854 but, though the subject interested me in a general way, the matter soon passed out of my mind, as something with which I had no further connection.

I must now ask your indulgence for an apparent digression, while I cite a few points connected with my own immediate history, which will have its bearing later on.

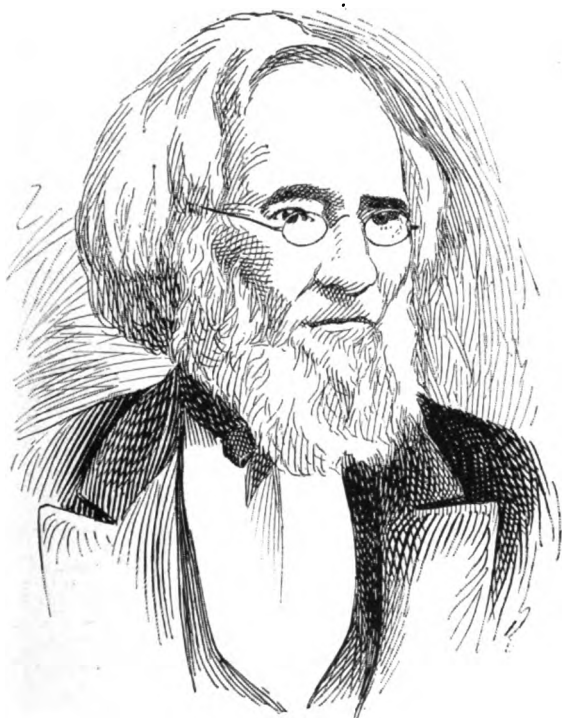
In 1850 I received the first permanent appointment made on the Resident Staff of the Emigrant Refuge Hospital, Ward's Island, after its re-organization with a Visiting Board of twelve physicians and surgeons. It soon became one of the largest hospitals in the world and was, I believe, one of the best schools for obtaining a thorough and practical knowledge of every branch in medicine. The experience of over five years in that institution embodied more than a life-time, under ordinary circumstances, in general practice, and it fitted me to become a specialist in after years. My term of service was two years, and a few weeks before it expired I was appointed, much to my surprise and gratification, Visiting Physician by the Commissioners of Emigration. When placed in this responsible position and made

the peer of some of the most distinguished members of the profession in New York, I was eighteen or twenty years the junior of the youngest man in the Board. As my duties at the hospital occupied but a portion of my time, I was now enabled to resume the practice of medicine among the tenement-houses, then chiefly situated on the east side between Eighth and Fourteenth Streets. I soon gained a competency sufficient, at twenty-five cents cash, or a dollar a visit if charged, with the addition of four dollars a day for visiting the hospital, to marry and settle down as a fixture.

Some time in the Winter I think of 1854-5, a great political change occurred. The Commissioners of Emigration were removed and, notwithstanding the fact that none of us had taken part in politics, we all lost our places to make room for the "political doctor," who had to be rewarded for his services to the party.

As part of my service in the hospital I had had over two thousand cases of "ship-fever" or typhus under my care. I set about tabulating the features in the history in each case, under some appropriate head, with the purpose of arriving at the etiology of the disease. Late one night in March 1855, I was engaged in this work in my office, having no idea of the hour as a snow-storm had been raging all day and the general quiet was very conducive to continued mental effort. I was suddenly startled by a loud rap on my window, and on opening the door I admitted Dr. Sims, whom I did not recognize. He apologized for disturbing me but, knowing no one else in the neighborhood and seeing my light, he had come in to get warm. His car had gone off the track and he feared he might have to walk home.

No man could make himself more genial, especially to young men, than he and, after asking me some questions about the work spread out on the table before me, he soon became interested in the subject and, I recollect, to a very flattering degree. Suddenly he turned to me and said: "You are just the man I am looking for. I have spent all the evening with some gentlemen in organizing a hospital for the treatment of the diseases of women and, though according to the by-laws my assistant must be a woman, if you will come up to 83 Madison Avenue to-morrow morning at nine o'clock I will show you something you have never seen before." I was punctual the following morning and then made my first acquaintance with old Mary Smith and with Margaret Brennan the nurse. The former was a patient sent by Dr. Mott and, I believe, the first and only one yet admitted. The latter, Margaret Brennan, you all know. Mary Smith had but recently



DR. DELAFIELD.

landed, an immigrant from the west coast of Ireland, and her condition was deplorable. I saw for the first time the application of Sims' speculum and the knee-chest position used.

But I was unable to say what I did see, beyond the fact that the patient's body in the neighborhood of the vulva seemed greatly excoriated by the escaping urine and that she was a most offensive and loathsome object. A grayish mass projected into the vagina which seemed to me to be an immense stone. But as Dr. Sims investigated the case, he found that she had a vesico-vaginal fistula, which appeared to extend from one side of the pelvis to the other. The bladder was filled with a wooden float from a seine-net, which was about the size of a goose-egg. This had been introduced by the local medical attendant before she left home, to prevent hernia of the bladder, which otherwise would have become filled with intestines and protruded through the fistula and out through the labia. The float had become encrusted with a thick deposit and was thoroughly saturated with phosphatic urine. After a remarkable display of patience and dexterity, Dr. Sims finally succeeded in removing it. It was done, however, amid her screams from intense suffering, for it was before the general use of anæsthetics. I saw the first administration of ether in Philadelphia, I think in 1847, and yet anæsthesia did not come into use, at least in the Woman's Hospital except for special cases such as ovariectomies, until about the close of our Civil War.

The history of this case, the first admitted to the Hospital and of whom many of you have a personal recollection as a nurse, is not without interest. Of the many hundreds of like cases admitted after her and cured she alone, after some thirty-four operations, is now incurable. Dr. Sims operated upon her a great many times without apparently gaining anything, but at length, and shortly before he went abroad in 1861, he did succeed in bridging over the base of the bladder and in preventing the fundus from prolapsing into the vagina. He made, however, no attempt to form a urethra. After I became Surgeon-in-chief I made for her a new urethra and gained for her retentive power, so that she was enabled to discharge her duties as nurse for six or seven years. After that length of time she began to suffer from irritability of the bladder, due doubtless to cold from exposure and brought on by her constant imprudence. She did not consult me but saw Dr. Sims, who found a small stone in her bladder. He decided to dilate the urethra for its removal and did so against my protest, for I

knew the character of the tissues which I had united would not bear the strain. He dilated, however, the stone was removed, and she has continued to this day without any retentive power. The operation was done shortly before Dr. Sims resigned from the Hospital, so that he had no opportunity afterwards, if he had contemplated it, to make an effort for her relief. For years past, as most of you know, she has been a common street beggar, and she would no doubt have been unwilling to lose part of her stock-in-trade, even if it had been possible at her age and in her condition to have attempted any further surgical procedure.

For various reasons, but chiefly from the fact that I had no official position, I was unable to do much at the Woman's Hospital until the Autumn, or early Winter, of 1855. I was then appointed Assistant Surgeon with full power to act in the absence of Dr. Sims. Being thoroughly familiar with the details of hospital management, of which Dr. Sims knew little, I was able to render efficient service and he was glad to be relieved of all detail work.

I began a systematic registry of the history of all cases, with descriptive drawings. I started a clinic and, after the first year, did quite as many, if not more, operations than Dr. Sims, whose private practice was already beginning to demand a great portion of his time.

Of the first Board of Managers, beyond a social acquaintance, I have little recollection or of their special work, save that of Mrs. David Codwise, the first Directress, and of Mrs. T. C. Doremus. Mrs. Codwise was well advanced in years yet she took a very active part I have been told in forming the organization, in obtaining the act of incorporation from the Legislature, and in collecting funds from among her friends for the early wants of the association. But Mrs. Doremus is the one most closely associated in my mind with all the early struggles made from day to day to establish the Woman's Hospital after it had ceased to be a novelty, and, owing to my position, I was thrown into closer relation with her than with any one else. The piety and faith of this good woman were remarkable. I cannot say more in praise of her than to compare her work with that of a Sister of Charity who, devoting her life to the service of others, is actuated alone in the discharge of her duty by the love of God and of her neighbor. I well recollect on more than one occasion, when we met in the morning, Mrs. Doremus has said: "Doctor, we have not a dollar in the house and it will soon be time for me to go out to get something for dinner." I would jokingly say: "Well, Mrs. Doremus, how is it



MRS. DOREMUS.



MRS. ABERNETHY.

possible to get something for nothing?" "The Lord will provide in time," she would answer. The dinner was always forthcoming, for she would not go very far before she met some business-man who would give her five or ten dollars for her purpose.

Mrs. Elisha Peck, who afterwards became Mrs. Abernethy, was a member of the first Board of Managers, and she has continued with great singleness of purpose to serve the hospital to the present day. With the exception of Mrs. Fordyce Barker, who resigned from the Board of Managers after two years service, Mrs. Abernethy and myself have outlived, I believe, every one else connected with the early history of the Woman's Hospital Association, and I sincerely hope she may be spared many years longer for her good work.

As I have stated, the Consulting Board was selected from the Faculty of each medical school in the city. Dr. Delafield was of the College of Physicians and Surgeons but seemed to take little interest in the beginning of the hospital, nor do I recollect ever to have seen him at a consultation during Dr. Sims' service.

Soon after the hospital was opened I was present at the first consultation. The case was that of a young woman with what was thought to be a movable tumor in the abdomen. The mass may have been a floating kidney, a pedunculated fibroid, or nothing more than a phantom tumor, as Dr. Sims had not yet reached that proficiency in diagnosis for which he was so noted in later life. He held, however, that it was a fibrous growth connected by a slender attachment to the uterus, and he wished the sanction of the Consulting Board to open the abdomen and remove it. He made so plausible a plea that at one time it seemed as though he would carry the Board with him in favor of the operation. All had spoken favorably when Dr. Stevens rose. He expressed his great interest in the subject but said he knew nothing about a fibrous tumor; doubted, in fact, if he had ever heard of one before. He felt every confidence in Dr. Sims and had no doubt that he would be successful, if he undertook the operation. But he protested, in the name of humanity, against such a procedure, for, if Dr. Sims was successful in the removal, it would not be long before every young doctor in the land would be opening the belly of every young woman to see if she had a fibrous growth. Surely the Spirit of Prophecy must have hovered over the old man, as he thus had a glimpse into the future.

Dr. Stevens was Surgeon to the New York Hospital then standing on Broadway opposite Pearl Street, in the midst of about four acres covered

with forest trees. He had the reputation of being a skilful and successful operator, but he was withal a very eccentric man. In the Spring of 1850 I made an effort to obtain the nomination for the house-surgeonship of the New York Hospital. I did not then know Dr. Stevens personally, though he had been an old friend of my father. So I called upon him one morning at his residence on Fourth Street, near the Bowery, to ask for his influence. When I was shown into his back-parlor office, he was walking up and down the room with his hands behind his back and in deep thought. Upon my addressing him, he recovered himself but refused to hear anything I had to say. Placing a pen in my hand he pushed me into a chair alongside the table and told me to write. He had evidently been lying in wait for some victim and proceeded at once to dictate his eulogy on John C. Calhoun, who had been a fellow-student with him at Yale College. In spite of my protests I was obliged to write until the task was completed, about two o'clock in the afternoon. I was then pushed out of the room and told to come back to breakfast the next morning, when he would hear what I had to say. I was punctual but did not get my breakfast. The old gentleman complained that my hand-writing was atrocious, and, receiving the information that he did not have the appointment for that year, I was shown the door.

Dr. Stevens was very simple in his tastes and used few instruments. He always carried in his pocket an old, stained, and rusty-looking curved bistury, with which he seemed to be able to do almost anything in minor surgery. Some years later I had frequent occasion to call in his services in my tenement-house practice and I well recollect how he put at naught all our aseptic precautions of the present day. The old bistury would be brought out and hidden among the bed-clothes, until the opportunity arrived for using it. After it had rendered service, if a basin of water were not at hand, he would manage, with a little saliva and the aid of the patient's blanket, to cleanse it sufficiently for use on the next occasion. The Doctor lived to an advanced age, but for several years before his death he was greatly incapacitated both in mind and body. A short time before his death, however, it became known among the friends of the family that a great change had taken place in his mental condition which seemed to have recovered its normal strength. He took the greatest interest in the illness of an inmate of his house, suffering with typhoid fever in which the diarrhœa was the most marked symptom. As Dr. Stevens had been so distinguished a physician in



his day the family were well pleased at his interest in the case, and particularly so when he proceeded to prepare some medicine for the patient. The story current at the time, and never contradicted, was that after two doses had been administered the family discovered that the Doctor had prescribed about an ounce of Spaulding's Liquid Glue, then just being introduced for household use. The old gentleman was correct from his stand-point, that if he could glue up the bowels the diarrhoea would cease. He was not allowed to prescribe again, however, but as he died shortly thereafter, almost the last act of his mind was connected with the practice of his profession of which he had been so bright an ornament.

Dr. John W. Francis was the most remarkable man in the Consulting Board. While prominent in his profession, he was more noted, with the world at large, for his literary attainments. He prided himself also upon his resemblance to Benjamin Franklin. His "Old New York" will always be a most valuable book of reference, as his recollection of persons and events connected with the history of this city during the first half of the century was indeed marvellous. His home, No. 1 Bond Street, was the house generally first sought for by any distinguished stranger. The Doctor was always selected as the man to be depended upon to preside at a public meeting or to take part in the advance of any new undertaking. Hence his connection with the Woman's Hospital, to which he rendered good service and was a true friend to the hour of his death. I am free to say that I was never much impressed with his professional attainments, but he was always kindly, especially to young men, and after he had his noon-day toddy he was most genial. He belonged to the old school, of which in many respects Dr. Pangloss in the "Heir at Law" was not so much of a caricature. He affected a certain pomposity of manner with a gruff voice and was a firm believer in the efficacy of the heavy gold-headed cane as a supporter of professional dignity. Moreover, he was an equally firm believer in what I once heard a darkey term "sarching medicines." He had lived in New York at a time when the people, if not primitive, were at least more simple in their tastes and habits and generally more robust as patients than at the present day. So he often bled heroically, and the administration of a good dose of calomel and jalap was his delight. He was wise enough to realize that no few of the trials of man have an origin in his digestive apparatus, so he never went unprepared. Mrs. Francis, who looked well after her husband's interests, was generally at the front door to receive any seeker after his

services. As the Doctor was getting ready to respond to any summons, Mrs. Francis would call to Mary Ann to "get the Doctor's hat, his cane, and the box of triplex pills."

In those days many of the physicians still dispensed their own medicines, and, by the way, I would suggest that in the interest of the profession I believe it would be an advantage to return to the old custom.

During one Summer when Dr. Sims was absent at Newport and I was left in full charge of the hospital, a woman happened to be brought in one day by a policeman, who had picked her up in the street, suffering from diarrhoea. She was too ill and feeble to be transferred to a general hospital and, as she spoke neither English, French nor German, it was impossible to obtain any history of her case. I soon discovered that she had not an ordinary diarrhoea and realized that the less medicine she received the better. So I set about carefully feeding her and hoped, with good nursing and stimulants, to get her well. Mrs. Mason, one of the Managers, was on the Visiting Committee at that time and came to me protesting that I was too young a man to assume the responsibility of treating such a case; as Dr. Sims was absent I must have a consultation. I offered no objection and as Mrs. Mason recalled passing Dr. Francis in his gig, she set out to bring him from his home after his one o'clock dinner. On the Doctor's arrival I undertook to give him as clear a statement as I could, but I soon saw that his mind was on some other subject and proposed that we should see the patient. Upon seeing her he turned and said: "Doctor, have you bled her?" I replied: "Certainly not, as she has needed stimulants and was almost pulseless at her admission." "Has she had any calomel, Doctor?" was the next inquiry. My reply was that I had only given her a small dose of castor oil. That such an opportunity should have been lost was too much for him and, raising his eyes to heaven in protest and with his arms extended, he exclaimed: "Then God be with her!" and left the house. As I let him out the market-boy came in with a basket of ripe peaches and, as I had lost my lunch by waiting for Dr. Francis, I helped myself to some. While passing the bed of the sick woman, she seized the peach I was eating and devoured it. I have always been a great believer in the promptings of nature, so I determined to let this woman have something to her taste even if some risk was incurred. The boy was called and I picked out five or six of the ripest peaches and gave them to her. On my return an hour later the woman was sleeping quietly, and from that time her



DR. FRANCIS.

convalescence was rapid and uneventful. I learned, subsequently, that she was a Swede and had just landed after a voyage of several months across the Atlantic in a sailing vessel. As I discovered from the condition of her gums that she was scorbutic, the effect of the peaches in checking the diarrhoea was explained. A few days later I met Mrs. Mason, who expressed great satisfaction at the improvement in the Swedish woman's condition and remarked: "Now you see the importance of having older counsel and that of an experienced man, for that woman has been improving every moment since Dr. Francis saw her." I did not attempt to undeceive her, and to the day of her death she labored on all occasions, as a duty, to obtain for her friends the advantage of older counsel.

I can recall but a single occasion on which Dr. Francis seemed to have lost his temper, and then it was sadly out of joint. He had missed his accustomed toddy at noon and had, in addition, just learned a disagreeable piece of news. This was to the effect that one of his best patients had been delivered, when he had not even suspected pregnancy, and, he being away from home when sent for, that some one in the neighborhood had gotten the case. He came into my office, as he often did when I was not at the hospital, and his first exclamation was: "Damn these hoop-skirts! Young man," he said, "there was a time, when I went to church, that I could look around me and form some idea of what my income might be during the year. But now, since the invention of these damned hoop-skirts, I can no longer judge of the condition of the women. I am away from home when wanted, and some young whipper-snapper is called in and gets the case." The situation was a clear one to him of personal grievance.

I used to think he was a grand old fraud, for he would come up and say: "My boy, I have no time to read now; is there anything new in the medical line?" I was a close reader myself at that time and might tell him of something I had recently read in one of the journals. For a while, it would arouse my indignation to overhear the Doctor shortly thereafter detailing the information I had given him with a most learned air and almost in my own words, to some one of his own age who listened in wondering admiration. But withal I had a very warm spot in my heart for the old Doctor.

Of Dr. Edward Delafield I knew nothing in connection with the hospital. He was a very popular man, had a large practice, and in later life devoted a great portion of his time to the treatment of the diseases of women. I know of but one feature of his practice, and that one

was to make nearly all his female patients ride on horse-back. He seldom took part in discussions at medical meetings, and his experience was lost with his death, for I am not aware that he ever published anything of special value. For some cause unknown to me he was never a friend of Dr. Sims, and possibly for the same reason he seemed to take no interest in the Woman's Hospital.

Dr. Horace Green was a quiet and mild-mannered man, who had many friends in the profession. He enjoyed for a time quite a reputation for the treatment of pulmonary diseases by direct application to the bronchial tubes. He certainly acquired great dexterity in introducing a probang-sponge into either bronchus at will. His chief remedy was nitrate of silver in solution of different strengths. From the damage done my throat in early life by his hand I gained a valuable experience and an aversion to the constant use of nitrate of silver as an application to mucous membranes in any part of the body. Dr. Green had a gentleman under his care in this city who was well known in society. One day while passing the probang into the bronchial tubes rupture took place somewhere, allowing air to enter the connective tissue. Emphysema supervened, the man became enormously distended about the head and neck and died a few days thereafter. It was a coroner's case and the community was thrown into a great state of excitement in consequence. It became a question as to how far the cause of death might have been due to the man's habits, which were not good. Dr. Green was fully exonerated, but his health seemed to have given way under the strain and within a short time his own death occurred.

My earliest recollection of Dr. Valentine Mott was in connection with the removal of my tonsils, about 1837, at my uncle's house in Broome Street, then a fashionable neighborhood but yet rather far up-town. The Doctor was always remarkably neat in the appearance of his linen and in later life was very particular about his dress. But when I first saw him he wore the Quaker costume, which made an impression upon my youthful mind. Dr. Mott had an European reputation as a surgeon, and he was certainly a very brilliant and dexterous operator. His office practice was always a large one, and when he moved up-town to Depau Row, in Bleecker Street, it was often impossible for a late comer to find standing space in his reception rooms. His office fee was, I believe, one dollar, and he kept together his office work until within a short time before his death. Dr. Mott is almost the only instance I know of in the profession, where any medical man



DR. HORACE GREEN.

occupying the social position which he did, has succeeded in leaving to his heirs a large competency acquired, as I believe his was, entirely from his professional work. As you advance in life you will find that the more successful you become, the greater become the demands upon your purse from all quarters, a tax you must pay for your prominence.

I will now briefly refer to one whom you all knew and honored, Margaret Brennan the nurse. She was a most remarkable woman, and one who, I believe, contributed more in her way, by her tact and good sense, to the success of the hospital, than any other individual ever connected with it. She could neither read nor write, a want which very few people recognized in her, and yet in over thirty-four years of service she never was known to have made a mistake or to have forgotten an order. Much that has now passed into our common stock of knowledge in the detailed care of patients, while under treatment and after plastic operations, particularly in the care of cases of vesico-vaginal fistula, we owe to the observation and judgment of Margaret Brennan, who was the pioneer nurse in this specialty. Her great tact was shown in attending strictly to her own business and in seeming to know nothing of the business of others around her. She was always cheerful and exerted a most beneficent influence upon the patients, in keeping them encouraged and contented with what was being done for their relief. Without ever committing herself she impressed each patient with the conviction that the surgeon in charge of her especial case was the most skilful. She certainly had her favorites, but in her loyalty to the Institution she never let those who were not so see any indication of her preference. Her whole life was moulded by an earnest desire faithfully to discharge her duties, and she discharged them through the love of God. Few about her ever realized what the incentive was which actuated her to spend a life of unselfishness, which was devoted, almost to the last, in serving God through her care for others. She was strong in the belief that she had been sent into this world for a special purpose, and she was firmly convinced that her reward was to be in proportion to the manner in which she availed herself for good of the opportunities given her. No one knew her so well as I did, during so many years and often under the most trying circumstances, and I am sincere in my belief that her reward was great after death for so well-spent a life.

After a continuous service of over thirty-seven years, I may justly claim that fate had decreed that my name must be associated with the progress of the Woman's Hospital. In the past I have been most

indifferent as to the credit due me, but as my services draw the nearer to a close, I am the more impressed with the importance of placing on record some statement of my work. Especially does this seem just to me, since even those who are to-day in charge of the management of the hospital have but a slight appreciation of my efforts in the past for its success.

If I know myself, I am the last person who would lessen in the slightest degree the credit due to Dr. Sims, and yet in all truth and in justice to myself I must state that he has received more than he would ever have been willing to have had claimed for him. In the past, there have been those who have credited Dr. Sims not only with the conception of the hospital but also for its full growth. I have been made to appear as though I had been only the shadow, and that I was, in addition, indebted to him for my knowledge in the specialty. Dr. Sims' name must be for all time, and justly, identified with the founding of the Woman's Hospital Association; I am willing that he should have full credit for everything done at the hospital while he was at the head of the institution, and even up to the Summer of 1862, though this includes over eight months during which he was absent abroad. I grant all this, notwithstanding the fact that it can easily be proved that I did, throughout our association, a large proportion, if not the greater part, of all the work, I being the younger man with more time to give to it.

It is for the older members of the profession, and especially those who have served on the Consulting Board, to verify my statement that the Woman's Hospital Association was not in a most prosperous condition when Dr. Sims left it and went abroad to live. And I will say further, that some of the most prominent men in the profession, of whom a number are now dead, such as Drs. Willard Parker, Buck, Post, Cheeseman, Van Buren, Delafield, Sabine, and others, were open in their hostility and were prejudiced against Dr. Sims, I have always felt unjustly so as far at least as I ever had any means of knowing, and were opposed to the Hospital at that time in consequence. If Dr. Sims had remained in New York, his reputation in 1862 was not sufficient to have made the Hospital eventually a success, and it mattered not so much who had charge of it as that a change had to be made in order to overcome the existing opposition. Dr. Sims was widely known at the South, and it was from this source that he received the most profitable portion of his practice. At the breaking



MARGARET BRENNAN, THE NURSE, HOLDING THE SIMS SPECULUM.

1857

out of the war, partly because his business had become less profitable, he was obliged to go to Europe and it was while he was abroad that he made his world-known reputation. On his return to this country years after as a successful man, many seemed to have forgotten their former relation to him and became most friendly in recognition of his success, thus showing a very common trait in human nature.

Between the Spring of 1855 and September 1862 my relations with him were as close as those between a father and his favorite son, and I shall ever keep green the memory of our intercourse at this time. I repeat that when I became first connected with the Hospital I had received a thorough hospital training. I had thus obtained a practical knowledge of my profession and had moreover held, for three years and more, the post of Visiting Physician to a large general hospital.

The first intention in opening a Woman's Hospital was to devote it to the cure of vesico-vaginal fistula by the use of an operation, of which Dr. Sims had then so far perfected the general principles that no improvement has been made upon his method to this day. The treatment of the diseases of women, however, was an after-thought, as it were, and when we both entered upon this field I possessed undoubtedly as accurate a knowledge as did Dr. Sims of what little was then known.

But he was a most skillful operator, and although beginning in an entirely new field, he never seemed to be at a loss; so great indeed was his ingenuity that he seldom did for the same indication any two operations alike. But from the beginning Dr. Sims drew his own deductions and I mine; they were seldom the same or even made from the same stand-point. If I operated or treated a case for him I followed out his views, but otherwise I followed my own judgment. I doubtless profitted by witnessing his ingenious methods of operating and certainly gained more thereby than he did himself, for I kept accurate records of the cases with the object of studying the results of differing operations and had many of these patients under observation for years.

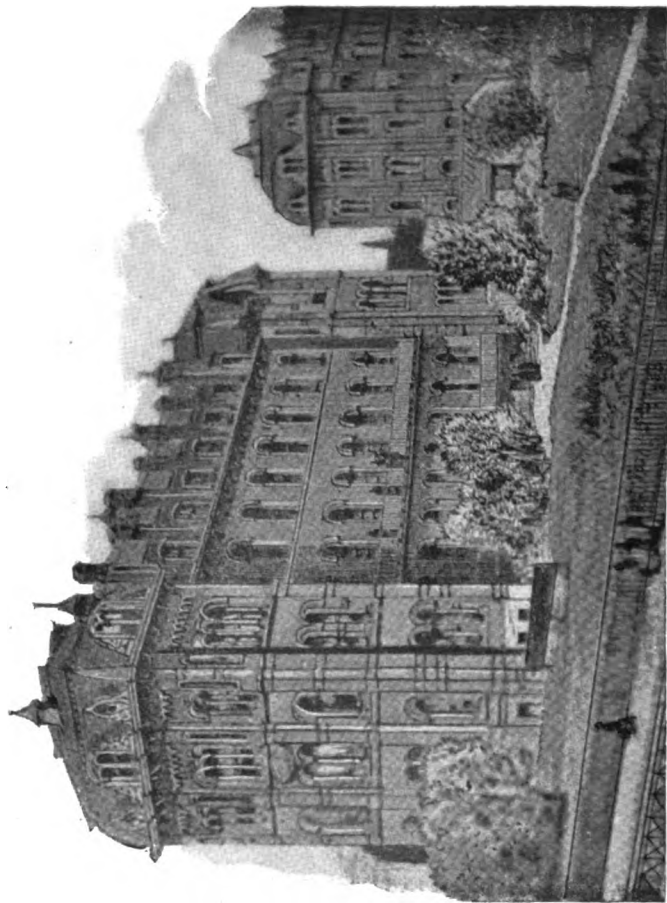
I received no other advantage, however, beyond the opportunity for observation, for during my entire association with Dr. Sims, I never received from him the slightest explanation or reason for anything he did. He was not a teacher and operated naturally with such rapidity that very few, unless they were familiar with his methods, were able to receive much benefit from witnessing his operations.

I was at times almost in despair, after I became Surgeon-in-Chief,

on account of the unfriendly feeling of certain influential medical men towards the Hospital, but I began at once to write and to teach, gave two clinics a week, and demonstrated each step fully upon the black-board. During the ten years that I held the Surgeonship-in-chief, my clinics were crowded by physicians from every part of the country. I claim thus to have popularized the Woman's Hospital and the practice of gynæcology itself. Seldom has it happened, I believe, that the teaching of any one individual has become so widespread in its consequences. I labored to teach the general practitioner how to do the least harm and the most good, as I hoped, for the relief of suffering woman. But I may have erred in judgment and I may have overdone the teaching, since the criticism of Dr. John Scott of San Francisco, whom some of you knew, was to the effect that I "would ruin the specialty by making every physician believe that he was a natural-born gynæcologist," and when my last work was published, he reiterated his opinion that I had succeeded in my efforts. I certainly succeeded at length in gaining the good will, I believe, of nearly all those who were in opposition to this movement, and so much so that the greater portion, at my request, became connected with the institution as members of the Consulting Board. The Hospital became so popular that Mr. Apollos R. Wetmore, the Vice President of the Board of Governors or the then recently chartered corporation of the Woman's Hospital in the State of New York, was able to raise within a very short period sufficient funds to build the pavillion now bearing his name. The Woman's Hospital Association under a Board of Lady Managers then ceased to exist as a corporation, but its members became afterwards a part of the organization of the Woman's Hospital in the State of New York.

So the facts of the case are, as regards the establishment of the present Woman's Hospital, that the money was collected by Mr. Wetmore, towards which a large number of my friends contributed, the building was erected under my supervision, the Hospital was then organized by myself and was in perfect running order for several years under my sole charge before Dr. Sims returned to this country, and consequently he had nothing whatever to do with it until it had become as fully established as it is to-day.

At an interview shortly after his return I offered to resign in his favor or to divide the service with him, as a recognition on my part of our former association. He declined to accept either proposition, because he then felt compelled to devote his whole time to building up



THE WETMORE PAVILION OF THE WOMAN'S HOSPITAL ASSOCIATION.

again a practice. But in the presence of others he paid me the compliment of saying that the Hospital had then reached, under my care, a degree of success which he had never deemed possible under any circumstances. At my special request the position was made for him and he was appointed Senior Consulting Surgeon and through my influence and that of my friends he was elected a member of the Board of Governors. I do not care to enter into the merits of our estrangement afterwards. He lived long enough to have a return of his old kindly feeling for me and to realize the false position in which he had been placed by others.

My feelings prompt me before closing to note the services of my old friend, Mr. James W. Beekman, who for so many years and with such devotion filled the position of President of the Woman's Hospital in the State of New York, and also to refer to other friends among the Governors and among the Board of Lady Supervisors, but I would be obliged at once to enter upon too extended a field. The history of the Woman's Hospital must be written by another pen, and my task therefore ends with the end of the Woman's Hospital Association as an organization.

THE OPERATIVE TREATMENT OF PELVIC ABSCESS.¹

BY ROBERT H. WYLIE, M. D.

New York

This paper is not intended to be exhaustive or historical or especially original in the ideas advanced and my excuse for it is the practical every-day importance of the subject.

In the treatment of pelvic abscess we have two objects in view, first the preservation of life, second the radical cure of the condition. Now how can we accomplish these two objects? Certainly not by always adopting one method of procedure, although that method may be used in a large majority of cases and even frequently accomplishes both of the objects by one brilliant stroke; nor should we always adopt other

¹Read before The New York Obstetrical Society, March 7, 1893.

methods which are less difficult, frequently remove the immediate menace to the patient's life, but infrequently effect a radical cure.

Pelvic abscesses are found in a large majority of cases practically confined to the tubes and ovaries and the attendant peritonitis and cellulitis are of no account and rapidly disappear on removal of the offending organs. These are the cases that begin to form soon after miscarriages, both after labor at or near full term and at any period after the existence of endometritis and salpingitis of the various kinds. In considering these cases we must remember that the extension of infection and inflammation is governed by mechanical, biological and physiological laws in a variable ratio in different cases. We get a large number of these cases with practically no history of acute sepsis or acute inflammation immediately after the miscarriage and yet they show beautiful specimens of pus tubes and abscesses of the ovaries. Hence we conclude that the inflammation of the tubes is partly mechanical as well as septic, that is the drainage from the cavity of the uterus is more imperfect immediately after a miscarriage than after a full-term labor, and so the fluids not necessarily septic at first are more readily forced into the tubes and perhaps the uterine ends of the tubes are not so well closed by the not fully developed decidua.

Moreover, when once in the small tube the material seems to inflame it more slowly and thus give the peritoneum time to localize the inflammation, whereas after full-term labors it travels through the enlarged tubes more rapidly and gives rise to a general peritonitis.

Of course the virulency of the sepsis would alter these conditions.

I believe that miscarriages at or before the first and second month and the subsequent endometritis are frequently a cause which is not recognized.

We get a few of these cases soon after full-term labors but they usually come later when the cervix closes more tightly, when frequently there is more or less retroversion and retroflexion and hence interference with drainage.

In the various cases dependent upon endometritis the extension by biological processes is the common one, hence the slow kind which does not give rise to such serious attacks of inflammation and pain.

This class of cases demand *cœliotomy* pure and simple and the sooner the case is done the better. Because, if done in the acute stage the operation is easy, you save your patient the risk of the abscess extending beyond the tube and ovary, and hence the many attending dangers. A high temperature and peritonitis are only

water incentives for immediate operation. Moreover you may have take away only one tube and ovary at this time and save the others appropriate treatment of the endometritis.

You may have pus escape into the peritoneum but if you wash out thoroughly it seems to make no difference in the recovery.

In the subacute stage the operation is still easy, frequently you can cut the abscesses out without spilling a drop of pus, and in both stages you also remove all of the pyogenic material.

I know that these cases vary in the virulency of their contents and the course they run, that all patients who have them do not die, nor have fistulæ into a gut or bladder, but most of them have one of these accidents and all of them are rendered invalids by pain and recurrent attacks of inflammation.

Rarely you can puncture these cases by vagina and relieve the menace to life, and there is the faint possibility that you might drain the single focus of pus and cure your patient. But happily it is just in these cases, where puncture is inadvisable, it is dangerous by reason of the small size of the mass and the uncertainty of its being shut off from the peritoneum. The operation then, for this class of cases, is celiotomy because it saves life and cures also.

Now we pass on to a second class of cases where the abscess has burrowed beyond the limits of the tube and ovary though it began in them. If the patient is suffering from sepsis, especially sepsis which besides raising the temperature and pulse has caused emaciation and general debility, I advise puncture by vagina or opening along Poupart's ligament. This removes the menace to life temporarily by decreasing or stopping sepsis and renders easier the operation for radical cure by celiotomy afterwards. When the mass is very large even though the signs of sepsis are not extreme, I believe it is best to puncture by the vagina if you can get fluctuation. I know that abscesses holding a pint of fluid can be enucleated, or punctured and washed out after the belly is opened before enucleation, because I have seen it done by Prof. W. Gill Wylie and I have done several not much smaller in size myself in the same way; but considering the amount of raw surface left after a necessarily long operation and the possible virulency of the pus I advise and do puncture by vagina, not with the hope of curing absolutely but of saving life. This operation does not preclude the curing operation. That it is a good operation is proved, I say, because the patients get so well they will often refuse the radical operation until forced to it by a recurrent attack.

Of course it is the duty of the surgeon to often insist on the radical operation after the immediate menace to life is over and he has elected a time when it is much less serious in character. I can, however, imagine that the destructive process can go on so thoroughly as to practically destroy the offending tube and ovary and hence the abscess is radically cured by free drainage. As a matter of fact the abscess *per se* is not infrequently cured, but the condition giving rise to it is left and frequently causes another. In this class come cases that have broken into a gut or bladder. In these counter-drainage should be sought for through the vagina even though your patient shows no marked symptoms of sepsis. This can usually be done by watching the amount of pus which comes from the rectum or bladder and the size of the mass, because the abscess often fills and then empties and repeats that process at varying intervals.

Taking advantage of a time when the abscess is full you may puncture or incise, secure freer drainage than that which was going on through the fistula, and thus you will often heal the fistula.

Here again if your cure is not radical it makes the cœliotomy for radical cure much less dangerous to life.

Where this procedure could not be carried out I have seen Prof. W. Gill Wylie do a primary cœliotomy in a number of cases successfully but this fact does not alter the force of the foregoing remarks.

Now we pass on to a third class of cases which usually begin to form soon after labor at or near full term. These seem to be of two classes according to their origin and the character of the tissue involved. First we take those that form in the cellular tissue which surrounds the cervix uteri and are caused by lacerations and contusions which are followed by sepsis. Here we have the truest type of the much-talked-of cellulitis but it is practically always acute and stops giving trouble when the suppurative process stops, possibly by absorption but usually by finding an outlet. I do not mean to say that you may not have a sort of subacute or chronic abscess on account of lack of free drainage or no drainage but here you have no secreting organ or tissue which performs a function which is different from cellular tissue elsewhere, therefore why should we look for those characteristics which were so long described as chronic cellulitis and which were peculiar to cellulitis in this region.

The inflammatory process and abscess may surround the cervix and dissect down between the vagina and rectum and also burrow up

between the folds of the broad ligaments and even balloon up the whole peritoneum of the pelvis.

As I have intimated we meet with this class of cases soon after labor and the course they run is not long as they terminate by draining into the vagina, by general septicæmia, peritonitis, or possibly bursting into a gut or bladder. These cases may give rise to secondary abscesses higher up in the broad ligament by means of lymphatics or veins but the primary abscess in these cases I believe rarely demands operative treatment other than washing out the cervix, as from the nature of their formation they usually get drainage before the tension is great. Then we have the phlegmons and phlebitis in the region of the pampiniform plexus due to absorption of septic matter through the lymphatics or veins from the uterus or torn cervix. A thrombosis from traumatism to the broad ligament during labor would favor the formation of these abscesses. These abscesses, I believe, are apt to be found somewhat later after labor than those in the cellular tissue about the cervix. They may be felt away off to the side of the pelvis and the uterus be quite movable, or they may involve the whole of one side of the pelvis as they develop. They may be more chronic than those just spoken of and more liable to break into a gut or bladder.

This third class may involve the tube and ovary by extension of the inflammation by continuity, especially in the kind that begin in the pampiniform plexus, or of course the tube and ovary may be inflamed by extension of septic matter along the mucous membrane independently but during the same period. This third class of cases demands puncture through the vagina or incision along Poupart's ligament because the operation saves the life of the patient and because it makes a radical cure. The old writers saw these acute cases and recognized the condition but they never dreamt of opening the abdomen and so though they saw and see many a case of abscess from pus tubes or ovaries, they did not and do not recognize it as such but think it their old friend cellulitis, and they refuse to disown their old friend. They have made mistakes and are still making them. The celiotomist sees many cases of abscess in the tubes and ovaries because they exist and he opens the belly. He sees very few cases in the cellular tissue because they are acute and kill the patient or find an outlet artificially or naturally and get well; so he begrudges the others their old friend cellulitis, few and far between though he be.

In my opinion these are the cases that get well and have children

afterwards and lead men into the error often, if not always, when they say they have radically cured pus tubes.

To do *cœliotomy* in these cases and sacrifice the tubes and ovaries, just because there is pus in the broad ligament is just as much a mistake as it would be to do *cœliotomy* and remove a healthy kidney for a perinephritic abscess. To do *cœliotomy* in any case and have to stitch the abscess wall to the wound, or leave portions of diseased tube and ovary, is poor surgery compared to puncture or incision, because the primary risk is much greater, you must use more or less prolonged drainage which favors hernia, and you offer no more hope of permanent cure.

Having been in the wards of pure surgery in Bellevue, and having seen some of the surgeons of continental Europe operate, I was imbued too much with the idea that a surgeon could trust only one of his senses, namely sight; so when I saw Prof. W. Gill Wylie thrust a trocar into the abdomen I would make a loud protest and a silent prayer lest he might injure a gut, a blood vessel, or the bladder or carry pus into free peritoneum; but he never did. Therefore as I saw him bring back to health many cases apparently hopeless by means of puncture and small incision, I began to have faith in knowledge of pathological anatomy and the sense of touch.

I mean to cast no reflection on my masters in Bellevue, for the best surgery I have ever seen was in old Bellevue and I never cease to realize the benefit and advantage it gives me for any special work.

The history of the case, the general condition of the patient, but best of all the local condition, will direct you in the choice of your operation. When in doubt open the belly and with the increased knowledge obtained decide for the best of your patient whether you will puncture by vagina, incise at the side, or enucleate, or what combination of these methods you will adopt.

I had done *cœliotomy* in a number of bad cases of pus tubes and abscesses of the ovaries without a bad result and finally a patient came in with the pelvis filled with a mass, having a high temperature and bad general condition. She evidently had a pelvic abscess. I did *cœliotomy* and after a very difficult operation I removed both tubes and ovaries filled with pus, but that was not all; she had besides an abscess involving all of the left broad ligament and surrounding tissues. My patient had already lost much blood, but this abscess had been torn into, so I had to remove it even though it had dissected well down on the pelvic bone. Right here, let me remind you it is quite a different

affair dissecting out, gouging out, or scraping out, an abscess from among intestines or other organs and tissues which you cannot remove, from enucleating a pus tube and ovary. One is easy, takes little time, and leaves no pus focus; the other is difficult, takes time, and causes bleeding with difficulty controlled and often you leave portions of pyogenic material which you must trust to drainage and the good general condition to take care of and limit to the pelvis. If the patient is weakened by general sepsis the peritoneum will not have that splendid power which it usually has of localizing the inflammation.

The case just spoken of was then a case of pus tubes and abscess of the ovaries, plus an abscess of the broad ligament.

She died of shock in about fourteen hours. I should have punctured first, not that I would have cured but I would have had a better chance for life with a secondary cœliotomy. In another and similar case I opened the belly, removed a right tube filled with five ounces of pus that projected up among the intestines and found the pelvis filled with another abscess which I punctured. She made a brilliant recovery and was in good condition the last time I saw her, though of course she has a mass representing a diseased left tube and ovary. In other cases I have opened the belly, verified supposed conditions, and opened at the side or punctured without further interference. In some of the cases of phlegmon or phlebitis in the region of the pampiniform plexus I have opened at the side and on introducing a finger could feel trabeculæ which I was sure were blood vessels not yet fully broken down. In some of these cases the contents are not really purulent, but you will give vent to decomposed watery blood and clots and broken-down shreddy material. These patients usually have a high temperature and it may not come down and stay down as in a purulent case, until all of the sloughing material comes away.

I am sorry to say that the histories of those cases not treated by cœliotomy have not been kept as fully or completely as those by that method, though they represent just as good surgery.

I find that Prof. W. Gill Wylie and myself have used the puncture or incision method about forty times in the last six years.

Eight or nine of these have had a subsequent cœliotomy and more need it for the radical cure, but I think at least a dozen were radically cured and some have since borne children.

I recall one who had a temperature of 105° and a correspondingly bad pulse and general condition, and she was intensely anæmic. We dared not give an anæsthetic. She was punctured by vagina and much

foul pus evacuated, and yet she has had a child since. This abscess began soon after labor and of course I believe it was a case of abscess in the cellular tissue. In all these cases I recall only one case that died, and she was practically dying when puncture was made. Furthermore we must remember that this method is usually pursued in the worst cases.

In conclusion I would say that pelvic abscess as far as I have seen it, and I think we get as bad cases in Bellevue as exist, is not by any means a fatal trouble, in fact is very amenable to proper treatment. When I find a pelvic abscess in a woman suffering from puerperal fever which has not yielded after washing out the uterus I am glad, because I think if she is able to localize the sepsis she will overcome it when relieved of the abscess by puncture.

When I began to assist Prof. W. Gill Wylie, in 1886, he used an ordinary trocar to puncture by vagina, with the patient in the dorsal position, and left it in place ; or put her in Sims' position, removed the canula, and dilated the track of the canula with his uterine dilators, and put in a rubber tube and stitched it to the cervix.

Sometimes he had considerable difficulty in introducing the tube and even failed temporarily once or twice, so I devised a trocar with a divided canula. The outer end of the canula, which has little holes on the side for a quarter of inch from the end, could be left in the abscess. By having this outer end of the canula armed with a rubber band under which a silver wire is passed, it can be readily stitched to the cervix, and then a rubber tube can be attached and the drainage thus carried to the vulva.

The objection to leaving the old-fashioned canula was that it was hard to keep in place and movement of the outer end caused a corresponding movement of the inner end. If after two or three days the canula should slip out of place the sinus is easily dilated. With this trocar and canula the whole operation can be done inside of two or three minutes and if necessary without an anæsthetic.

A CASE OF EXTRA-UTERINE PREGNANCY: RUPTURE
AT THE SECOND MONTH: ABDOMINAL SECTION
TWO WEEKS LATER: BROKEN DOWN AND PUTRID
HÆMATOCELE WITH GANGRENOUS WALLS: RE-
COVERY.¹

BY WALTER L. BURRAGE, M. D.

Boston, Mass.

Mrs. M. O., twenty-six years old, entered St. Elizabeth's Hospital, October 20th, 1892. She gave the following history: Came to this country in 1883 from Norway, her birthplace, and has lived in the vicinity of Boston ever since. Family history good with the exception of typhoid fever six years ago, has never had any serious illness. Last January was confined to her bed for two weeks with an attack of vomiting, swelling of the abdomen and diarrhœa. Since this time has considered herself a well and strong woman. Her menstrual history was one of regular but painful flow. She came round every twenty-six days and flowed four or five days. When a girl she had been confined to the bed for one day during each period but of late years the pain had been less.

She was married for the first time in December 1891 and had never skipped a period up to September 1892, the August catamenia (12th to 17th) being normal in every respect. In September she did not come round nor in October, being due on the third of the latter month. Although working very hard taking care of a sick friend she felt pretty well during these two months.

October seventh, or at the end of what would have been the October sickness, and from five to seven weeks from impregnation, she was suddenly seized with excruciating pain in the lower abdomen—it was as if some one had stabbed her, she said. The pain was accompanied by a bearing down feeling and a desire for a movement of the bowels. This happened in the morning after breakfast. The night before she had gone to bed unusually tired. Her friends said she

¹Read before The Woman's Hospital Alumni Association, January 17th, 1893.

looked bad and she confessed to "feeling queer." She slept well, however, and rose in the morning in her usual health. The pain seized her while making a bed. Her friends carried her upstairs and while at the water-closet she fainted. On coming to she began to vomit and subsequently the bowels moved several times. She went to bed and began to complain of swelling and tenderness of the abdomen that became more marked from day to day and had persisted during the two weeks prior to her entrance to the hospital. The night of October seventh she began to flow slightly, there being only enough to soil one napkin. This slight flow continued for a week when she had a hemorrhage of considerable amount. Nothing but clots were passed. During this week there was persistent vomiting, exquisite tenderness of the abdomen to light pressure, with much distension, and the intolerable bearing-down feeling. The following week her symptoms became worse. She was unable to retain nourishment by the mouth, required about one hypodermic of morphine a day, had a temperature in the neighborhood of 103° and was losing strength fast. There were no chills and no sweating. There was a slight bad smelling vaginal discharge of a dark color. At this time her medical attendant decided to send her to the hospital where she arrived on the afternoon of October 20th.

On admission she presented the following signs: A fairly-nourished woman of small frame with a pinched expression of countenance. Temperature, 102.8° ; pulse, 112 and thready. Abdomen moderately distended, more prominent to the left of the median line; tympanitic everywhere and very sensitive to light touch.

Dr. F. W. Johnson, in whose service she was, saw her on the following day and advised an ether-examination. With the patient anæsthetized he made out the uterus, somewhat enlarged, lying in an anterior position in front of a fluctuating mass the size of a cocoanut that crowded the rectum and rose out of the pelvis. He made the diagnosis of a ruptured extra-uterine pregnancy and broken down hæmatocele. The next day he asked me to see the case with him and kindly referred her to me for operation. We were at a loss to account for the tympanitis over the fluctuating mass except on the supposition that it was due to overlying intestines.

Sunday October 23d, I operated with the assistance of Drs. F. W. Johnson, Malcolm Storer and the House Surgeon. The patient was in rather poor shape and required stimulation during the operation. After the customary antiseptic precautions the median incision, three

inches long, was made. There was a good deal of oozing. On cutting through the peritoneum, which was thickened and opaque, there was a gush of gas having the foulest sort of odor. Dark fluid blood and disorganized clots and shreds of green, gangrenous tissue welled up out of the wound. It appeared that I had opened directly into the sac of the hæmatocele. Altogether there was about a quart of fluid and *débris* in the sac.

Two fingers in the abdomen revealed a cavity bounded in front by the uterus and appendages (the uterus being perhaps three inches in depth) behind, by a wall of plastic gangrenous lymph and omentum extending vertically up from the anterior surface of the spinal column and the great vessels, at a point about two inches above the promontory, to the anterior parieties and apparently walling off the general peritoneal cavity. Below, the cavity was bounded by the promontory and curve of the sacrum, by the rectum and pelvic floor; above, by the parietal peritoneum and on the sides by the pelvic walls. The entire inner surface was green, as far as I could see it. From the fact that the sac walls were everywhere adherent to pelvis, omentum and intestines, from the foul character of the inside, and from the fact that the general peritoneal cavity had not as yet been opened, it seemed inexpedient to try to remove the sac entire. The clots and debris were washed out with hot salt solution. Both ovaries and tubes, adherent to the sac-walls were so rotten that it was impossible to form a pedicle. The right tube was three times the normal size. The ovaries presented nothing beyond strong adhesions and the evidences of decomposition. I literally tore both appendages out of their beds on the front and sides of the sac. There was considerable oozing on the right side.

Although the patient was on the Trendelenburg frame I did not like to elevate her hips from fear that should there be an opening into the general peritoneal cavity the foul matter from below might find its way there. After repeated washings with hot saline solution and after scraping out with my fingers a large amount of necrotic debris, the cavity was sponged dry and packed with a gauze-handkerchief containing three strips of sterilized gauze rubbed in an abundance of iodoform, the ends being left protruding from the lower angle of the wound. The wound was closed in its uppermost inch with two silkworm-gut sutures, passing through the entire thickness of the walls, and it was dressed with baked gauze, cotton and a binder. Time of operation three-quarters of an hour. Patient reacted well from the ether though she required stimulation for two days. There was no odor from the

wound, which discharged freely until the third day when the gauze was removed from the handkerchief. Then some of the original stench was perceptible. Two new pieces of gauze were inserted. On the fifth day all the gauze was removed from the cavity, which was then discharging about three ounces of greenish pus in twenty-four hours, and a glass drainage-tube three inches long and three-quarters of an inch in diameter was substituted. At this time the patient was showing most markedly the effects of septic absorption. She had a temperature in the evening from 103° to 104° and sweating. From now on she steadily improved. The temperature became normal November 8th and remained so. The tube was removed twice a day and the cavity irrigated with 1-8000 corrosive sublimate and peroxide of hydrogen and then filled with dermatol, the tube being gradually shortened until it could be dispensed with altogether. A month after the operation she was up and about the ward there being a sinus about half an inch in diameter running down to the bottom of Douglas' pouch. She left the hospital at the end of November and soon moved to Fall River.

I saw her at my office yesterday. The sinus had closed completely; the uterus had become smaller and there was no evidence of inflammatory trouble in the pelvis beyond limitation of the mobility of the uterus and some thickening in the cul-de-sac. She said she had occasional weakness in the small of her back but with this exception was well. Her appearance bore out her statement that she was as fat and rosy as she had ever been.

THE DIAGNOSIS OF PELVIC ADHESIONS.¹

BY A. PALMER DUDLEY, M. D.

Upon the diagnosis of this condition rests not only the information that you shall give to your patient, but the prognostication as to the result of your work and the final result to the patient. In order to begin a proper discussion of the subject, I must refer you back to your student days and ask you to recall your study of the normal uterus in a normal pelvis with normal appendages, for if

¹Transactions of The Woman's Hospital Alumni Association, January 17, 1893.

the woman has such a condition you have little cause for making such a diagnosis. We begin with the normal uterus, ovaries, tubes, blood-vessels, rectum, vagina, etc.—what is their relation in the pelvis? It is seldom that we find adhesions in a pelvis where we do not find a previous history of inflammation, although many patients will come to us who will declare that they never had any inflammation of the pelvis and still we find adhesions. Therefore we must find, if we are looking for a healthy pelvis, this condition: the uterus occupying a normal position with respect to the bladder, vagina and rectum. The general curve of the pelvic viscera maintained from the vagina to the fundus of the uterus, and if such a condition exists the organ occupies a position in which the fundus of the uterus points to a line midway between the navel and pubes, and if it is a healthy pelvis that organ is perfectly movable. The tubes and ovaries occupy a half-circular position from the fundus of the uterus to the sides of the pelvis. If the broad ligaments are healthy, they are uncongested and movable; they are not on a line with our finger as we pass it into the vagina; they are not spread out but occupy a certain position, narrow, as we know, but running on a direct line from the side of the uterus to the pelvis. If such a condition exists and our patient does not give us any history of having had a previous inflammation of any kind, we should expect to find the uterus perfectly movable in the pelvis. Although it may occupy a different plane in different women. In some we will find it nearer the vulva than in others. The variation is considerable, but in the majority of cases that will come to us for pelvic treatment they will at once affirm that they suspect pelvic disease and come to us for that purpose. After getting the history, we make up our mind that we must examine this woman. Bimanual examination is always in order. The patients will invariably give us a history of some trouble, or some abnormal condition, either during menstruation, if in a girl, or during childbirth if the woman has been delivered, or following miscarriage if she has had an abortion, or if in old age she may have some malignant disease springing up. Then comes the examination. If we find the conditions which we would look for in a normal pelvis absent, the uterus out of position, either anteфлекed, anteverted, retrofleked or retroverted; if we find it occupying a plane lower than the normal, or the broad ligament, tender to the touch, thickened and lying cross-wise of the pelvis so that we touch the posterior surface rather than the lower, and instead of a space in the cul-de-sac we find it occupied by an oval body, tender to the touch,

possibly giving the patient extreme pain upon pressure, or by an elongated body, sausage-shaped, tender to the touch, or possibly not; or if we find upon digital pressure the uterus immovable in the pelvis, enlarged possibly from displacement, tender to the touch, discharging a quantity of mucus, (that is abnormal in a healthy woman), injured perhaps from childbirth, or fixed in its position from long-continued occupation of it—we at once make up our mind that this woman is troubled with a condition, possibly the result of inflammation, and possibly only the result of accident. What would be the next step in the diagnosis? Should we content ourselves with simply making the digital examination with the bimanual touch and say to the patient "You have a uterus malposed and adherent?" I think not; we should go further than that and make an instrumental examination. Therefore, put the patient on the side, introduce a Sims' speculum, and make proper instrumental examination of the uterus. We may not be satisfied with that, even; but adopt another method of examination that would help still farther—that of putting the patient in the knee-chest position and taking advantage of gravitation to assist us. But if, after all these methods of examination had been exhausted, we found we could not replace the uterus so malposed or imprisoned, our next effort should be to find out what form of adhesions existed and what was the cause of them, also the extent of the adhesions and what would be the final outcome so far as the medicinal and surgical treatment was concerned, and what the final prognostication in the case. Upon the history of the case as given us largely must depend our diagnosis. If the woman gives a history of miscarriage with inflammation, a correct diagnosis of the extent of adhesions might be rather difficult—but if she gives a history of a fall, as in skating or horse-back riding, without inflammation following—the chances are that the adhesions will be found to be slight—with a history of gonorrheal infection a different diagnosis must be given, and certainly upon each depends a proper prognosis in the case. What are the forms of adhesions? Major and minor, solid and semi-solid, elastic and inelastic, depending on the gravity of the case and cause of the condition. If the condition exists in a girl, the treatment would be one thing; if in a woman who had suffered from abortion, it would possibly be another; if in a woman who was the victim of gonorrhœa, it would be another. But we have, as adhesions in the pelvis which we can subdivide for clinical purposes, the forms elastic and inelastic, and what we call "string-band" adhesions. If a woman has had a gonorrhœa,

extending to the abdominal cavity, and she has been previously the victim of a displaced uterus, the diagnosis of pelvic adhesions is perhaps easy and perhaps not. If she is a woman that has had only a minor inflammation, who has a uterus quite movable but still imprisoned to a certain extent, possibly the diagnosis will depend entirely on instrumentation. We may be able to introduce a sound, and swing the uterus forward on the bladder, but still the moment the sound is withdrawn it will spring back again into its old position. The following are the points that I rely upon in making a diagnosis of pelvic adhesions :—First, the history of the case, which you can always glean if you take time ; second, the normal anatomy that should exist in a woman's pelvis if she is healthy ; third, the deviation from the normal anatomy which has taken place in the patient I have under examination ; fourth, the amount of adhesion which exists, the ease with which I can replace the uterus, or the persistency with which it returns to its old position and stays there. Then add to that the knowledge to be gained from digital touch that you have a uterus thrown out of position, and, if you can lift it back, quick to return to its old position ; and the fact that you know, from your understanding of the normal anatomy of the pelvis, that you have a uterus bound in such a position that it is inelastic to the touch, the proper circulation interfered with to such an extent that you cannot lift the uterus above its normal plane without pain to the patient, possibly with danger of lighting up a peritonitis ; that in place of having the fundus point toward the spot I have indicated, you find it in an abnormal position ; if you find the os pointing out of the vulva or against the bladder—then all these conditions combined lead us to make a diagnosis of pelvic adhesions.

The string-band adhesions, are the most difficult to diagnose that we have to deal with, for they give the least trouble so far as the constitutional effect upon the patient is concerned and are the easiest amenable to treatment. There are cases where a patient has had a slight peritonitis, where there has been an exudation, and a veil of lymph thrown across from some portion of the uterus to the sacrum posteriorly ; and where time, with the efforts of nature and the treatment by the physician have relieved those adhesions to such an extent that the once firm veil thrown across the pelvis has been absorbed to such an extent that it is drawn into fibrous strings of adhesions ; these serve as a means of imprisonment for the uterus within a certain space. Those are the conditions that will puzzle you the most. I am now speaking of pelvic adhesions that are inflammatory and existing between the

uterus or the appendages and the pelvic wall. There are many conditions of adhesion within the pelvis which would be included under that term that are not related especially to the uterus. I am referring to the adhesions between the omentum and the abdominal wall, the omentum and the bladder, the omentum and the intestines, or, if you please, the omentum and a portion of some other organ within the abdominal cavity, and all of which will puzzle you, and will, perhaps, call for surgical treatment as much as those I have spoken of, but still will be very difficult of diagnosis. Such conditions you have undoubtedly seen as intestinal adhesions between loops of intestines, adhesions between the omentum and the abdominal wall, or between some other organ within the pelvis, as a prolapsed kidney or a prolapsed spleen—these I do not consider come within the province of this discussion and for that reason I dismiss them.

I will refer to only one other method of examination, because, although it may not be sufficient in all cases, it is certainly a very great assistance in making such a diagnosis, and that is bimanual rectal touch. I nearly always employ it, because my experience is that by that means one can make a more perfect examination of the contents of the pelvis behind the uterus than by any other. I lay stress upon this method of examination in making diagnosis of pelvic adhesions.

INTRA-PELVIC ADHESIONS; THEIR ETIOLOGY AND PATHOLOGY.¹

BY HENRY C. COE, M. D.

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By intra-pelvic adhesions I understand in a broad sense all pseudo-membranes, indurated masses, or filaments of fibrous tissue, within the pelvis resulting from a former para-metritis or peri-metritis. Waiving any reference to the much vexed question of the relative frequency of pelvic cellulitis and peritonitis, it may be stated in a general way that inflammatory processes in the pelvic peritoneum are by far the most common cause of adhesions which surround and fix the uterus and its adnexa, and also coils of intestines, while similar processes in the cellular tissue between the folds of the so-called broad and sacro-

¹Read before The Woman's Hospital Alumni Association, January 17th, 1893.

uterine ligaments give rise rather to localized indurations than to actual pseudo-membranes or adhesions. This is now generally admitted and here let me protest against the terms "chronic pelvic inflammation," or "chronic peritonitis" as applied to a condition which is really the result of a former inflammation. I hope that the time will come when we shall cease to regard as the seat of a progressive inflammatory process tissue which represents nature's conservative attempt to repair the results of a pre-existing inflammation. This is by no means theoretical, but bears directly on practical surgery. Adhesions may be classified in several ways, according to their etiology, site, or anatomical character.

Etiologically the following subdivision may further be made :

a. Adhesions may be secondary to specific inflammation of the tubes, either gonorrhœal or tuberculous.

b. They may follow septic endometritis and salpingitis (puerperal and traumatic.)

c. They may be secondary to simple aseptic traumatism as parietal adhesions of the intestines following cœliotomy.

d. They may rarely attend so-called "idiopathic" inflammation of the pelvic organs and tissues, due to "cold," "suppression of menses," etc. Characterized by their site, pelvic adhesions may be peri-uterine, peri-oöphoritic, peri-salpingitic, or intestinal; as to their anatomical character, they may be broad, firm and unyielding, or thin, filamentous and easily stretched.

From an etiological standpoint we are more interested in the first classification. The others will be referred to in connection with pathology.

I need not dwell upon the causation of adhesions attending ovarian and tubal disease, since you are sufficiently familiar with them. This subject has been elaborated by many recent writers, notably by Bland Sutton. The development of adhesions following cœliotomy is a more practical question. It has been carefully studied both in the laboratory and at the operating table. My own experience has been limited to the latter, but a brief resumé of the experimental observations will be of interest. Dembrowski (Langenbeck's *Archiv.*, Band xxxvii, p. 743), as the result of numerous experiments upon dogs, cats and rabbits, arrives at the conclusion that foreign bodies, ligatures (with the included tissues) and eschars, left after touching the healthy peritoneum with the thermo-cautery, cause peritoneal adhesions; iodoform, blood-clots, mechanical irritation and antiseptic fluids, on the contrary, do not

produce this result. He thinks that the peritoneum in the human subject is similarly affected. Küstner (*Centralblatt für Gynäkologie*, No. 24, 1890) opposes this view, presenting evidence from post-mortem examinations on the human subject. Kelterborn (*Centralblatt für Gynäkologie*, No. 51, 1890) opposes Küstner. He states that a single raw surface on the healthy peritoneum is sufficient to cause adhesions; as the endothelium does not reform when destroyed, these are practically unavoidable. From experiments on animals he concludes that eschars do cause adhesions while aseptic ligatures do not, but tend to become encapsulated. Practically, then, the use of the thermo-cautery to separate pseudo-membranes during operations is not objectionable. In general, he thinks that the formation of peritoneal adhesions after cœliotomy, when the peritoneum is healthy, is due almost invariably to infection.

Thomson (*Centralblatt für Gynäkologie*, No. 5, 1891) has made a careful experimental study of this subject, after reviewing the work of former observers. His deductions are especially valuable by reason of the extreme care used in his operations. He summarizes as follows:

1. Omental and intestinal adhesions follow perfectly aseptic cœliotomies. Parietal adhesions occur when the abdominal wound heals by first intention.
2. Superficial defects in the peritoneum are without results as regards the formation of adhesions.
3. Sterilized foreign bodies (such as gauze) may lead to their formation if they remain too long within the peritoneal cavity.

Apropos of the irritating effect of foreign bodies and antiseptics the following observation may be cited: Delbet, Grandmaison and Bresset (*Annales de Gynécologie et d'Obstétrique*, 1891) have found that solutions of carbolic and salicylic acids, corrosive sublimate and biniodide of mercury irritate the healthy peritoneum and favor the formation of adhesions, while iodoform and salol seem to exert little action, either antiseptic or irritating. Van Stockmer (*Nedrl. Tijdskr. v. Verlosk en Gynäkol.* Bd. ii, Hft. 1) has given particular attention to the effect of the intra-peritoneal gauze-tampon. He found that while exposure of the peritoneum to the air and vigorous rubbing with a sterilized tooth-brush failed to cause adhesions, they formed in fifty per cent. of the cases in which a loop of intestine was left in contact with a raw surface, though this might be prevented by vigorous peristalsis. When gauze-tampons were introduced into the pelvic cavity, it was found that the intestines became attached to them. If the gauze was

left *in situ* for five days it drained the general cavity and when removed only slight adhesions existed, and there was no separate cavity formed; but if it remained for a week or more, it became encapsulated and extensive adhesions were formed. The writer's practical objections to Miculicz's tampon are that it favors not only the formation of adhesions but intestinal paralysis. It will be evident from the above that there is considerable difference of opinion from an experimental standpoint with regard to the causation of adhesions in cases of abdominal section. When we consider it from the point of view of the practical surgeon, certain facts seem to be well established. Doubtless, all of us have come to the conclusion that after the removal of adherent ovaries, tubes, ectopic gestation-sacs and cysts, it is impossible to prevent the re-formation of adhesions. These may not be as firm and general as before, but still they do occur in spite of the suturing of raw surfaces, gauze-tamponade, or cauterization. Morris has suggested covering such surfaces with a thin layer of aristol, but practically this has not proved to be a preventive. Drainage, either by the tube, gauze-drain or Miculicz tampon, certainly does not prevent, but rather favors, the formation of adhesions by introducing a possible channel for sepsis. I have made up my mind to dispense with such drainage except in pus cases, relying upon active peristalsis to prevent the most serious form of adhesions—intestinal—which is secured by moving the bowels within from twelve to thirty-six hours after operation. The advocates of catgut ligatures have presented strong evidence in favor of this material as opposed to silk for preventing the development of adhesions and indurations around stumps. Kelly's plan of covering a raw surface behind the uterus by securing the organ in a position of retroflexion strikes me as more ingenious than scientific in its conception. Certainly the patient cannot be much benefitted by fixing her uterus in an abnormal position. Regarding the development of adhesions in uncomplicated cases, it may be said that these too have been frequently noted by surgeons who have had occasion to perform a second cœliotomy upon the same patient, when the first operation was simple and the convalescence afebrile. Odebrecht (*Centralblatt für Gynäkologie*, No. 34, 1889) reports a case in which he operated twice for persistent pain following the primary cœliotomy, and I cited a similar case at a former meeting of this Association, in which it seemed to be impossible to prevent a loop of intestine from contracting fresh adhesions each time. The patient subsequently died of acute intestinal obstruction before I could relieve her by a fourth cœliotomy.

Her bowels had previously been regular, but she was seldom free from colicky pains. We have had opportunities of studying the development of adhesions in connection with ventro-fixation, and now know that Czerny's method of scraping the anterior surface of the fundus uteri secures the most solid attachment, although adhesion of the opposed visceral and parietal peritoneum also occurs with other methods—even with Schücking's—simply from the irritation at the points of suture. In concluding this division of the subject, I would add that in uncomplicated cases, i. e., where extensive pseudo-membranes have not been separated at the time of the operation, I concur with Kelterborn in believing that the formation of adhesions is to be referred to mild septic infection, rather than to traumatism of the healthy peritoneum. Clinical evidence of this may be afforded by slight febrile phenomena during the first week of convalescence. A consideration of the pathological significance of intra-pelvic adhesions opens up such a broad theme that I can only touch upon its salient points. First of all there is the question of persistent pain after *cœliotomy*, to which I have often alluded in former papers. Aside from the constant pain caused by fixation of the uterus in an abnormal position, or to traction upon the cervix (and indirectly upon the neck of the bladder), are the colicky pains due to intestinal adhesions, which are often entirely out of proportion to the size and extent of the bands. A single loop of gut, slightly attached within the pelvis, may cause more suffering and place the patient in greater danger of obstruction than firm and universal abdominal adhesions. And this leads me to observe that the limitation of the normal mobility of organs by such bands is an important consideration, too little understood. To absolute fixation of the uterus and its adnexa we have already alluded. Adhesions about the ovaries not only compress surrounding nerve-filaments, but seriously interrupt the circulation and increase existing venous congestion; hence, also, the cases of persistent *metrostaxis* after *cœliotomy*. The diseased glands, buried in masses of exudation, cannot enlarge normally under the influence of the menstrual *nisus*—a fruitful source of pain and reflex disturbances. Neoplasms fixed within the pelvis cause the most severe pain and pressure symptoms, as noted in the case of retro-uterine dermoid cysts and ectopic sacs. Vessels and ducts are directly compressed within the pelvis as I have demonstrated in the case of the ureters, leading to serious trouble in distant viscera. Diagnosis is rendered obscure, and the difficulty if not the risk of abdominal and pelvic operations is greatly increased by extensive ad-

hesions. Their influence on pregnancy and parturition is not to be overlooked. I have reported cases in which there was not only great pain during pregnancy, due to the pressure of old perimetric bands and adherent adnexa, but serious complications during labor and the puerperium, referable to the same conditions. Normal parturition may, of course, follow ventro-fixation, but abortions have frequently been reported. The artificial adhesions may stretch as the pregnant uterus rises out of the pelvis, though this is not invariably the case. Holowko (*Zeitschrift für Geb. und Gyn.* Band xxi, Heft 2) cites the case of a woman eight months pregnant, who on making a sudden movement was seized with a sharp pain in the abdomen and developed general peritonitis, which soon terminated fatally. At the autopsy it was found that an adherent coil of intestine had become detached, causing profuse hemorrhage. No evidence of sepsis could be discovered. In a Cæsarian section at term, (the patient having had a coeliotomy a year or two before), I noted filamentous adhesions between the fundus uteri and the anterior abdominal wall.

We must not forget the conservative action of intra-pelvic adhesions, especially those around the fimbriated ends of diseased tubes. While they are secondary to the tubal diseases, they in turn seem to confine its virulence to the tubes themselves. If it were not for the adhesions surrounding fistulous tracts (especially those communicating with the bowel), many cases would terminate fatally, where the patient not only survives but may be cured. It is hardly necessary to dwell upon the probable mortality of ruptured ectopic gestation if the sac and the hæmatocele following intra-peritoneal rupture were not shut off from the general cavity.

Finally, the important influence of adhesions upon gynæcological operations deserves our careful consideration. Since septic infection is now regarded as a far more serious evil than traction upon or separation of pelvic adhesions, we no longer fear to operate upon the uterus when it is not freely movable, although conservative surgeons question the propriety of this step; this they do, not so much by reason of the actual risk but because of the uncertain relief afforded to the patient by repairing a lacerated cervix, for example, when the uterus (or adnexa) is fixed in an abnormal position, believing that the symptoms are due rather to the adhesions than to the cervical lesion. Of course, in the presence of malignant disease one is not deterred by moderate adhesions from attempting hysterectomy, though much discrimination is necessary in deciding how far this is a contra-indica-

tion. I feel that I have merely sketched an outline of the subject, to be filled in by those who will continue the discussion. I have not touched on several points of interest, viz., the vascularity of adhesions, their "absorption" or distensibility (spontaneous or under treatment), their relation to recurrent pelvic inflammatory processes, to malignant disease, et cet. I hope that these will not be overlooked by the speakers who follow me. If I may be pardoned an apparent infringement on the province of the gentleman who will discuss Surgical treatment, I would conclude with the following practical deductions :

1st. It is not possible to prevent the formation of adhesions around the adnexa in acute inflammation of the latter, nor is this desirable, since they represent a conservative process of Nature.

2d. Intra-pelvic adhesions are to be regarded as serious, not so much by reason of their serving as foci for fresh inflammatory processes, as from the pain which they occasion by fixing organs in an abnormal position and compressing nerves and vessels.

The results of minor operations upon the uterus, especially trachelorrhaphy, are frequently *nil* as regards the relief of symptoms, since these are due not to the lesion which is repaired, but to existing adhesions.

3d. The absolute prevention of the re-formation of adhesions, which have been separated in abdominal section, has not yet been attained. They may, however, be limited by perfect asepsis, by suturing accessible raw surfaces, especially in the intestines, by the use of catgut ligatures and the rejection of drainage or the gauze-tampon (in non-suppurative cases) and, above all, by the maintenance of EARLY AND CONSTANT PERISTALSIS.

4th. A positive prognosis as to the absolute relief of pain after coeliotomy should never be given, even in uncomplicated cases, because we cannot promise immunity from subsequent intra pelvic adhesions and indurations.

THE SURGICAL TREATMENT OF PELVIC ADHESIONS.¹

BY CLEMENT CLEVELAND, M. D.

In regard to the surgery of pelvic adhesions, I suppose we have a right to assume that anything can be classed under the head of surgery of pelvic adhesions which is not strictly medical. We will take first the extra-peritoneal method, and then the intra-peritoneal.

The extra-peritoneal method, of course, has chiefly to do with the vaginal treatment. The first important thing is the question of diagnosis. You first have the bimanual method of examination to determine the nature of the trouble. If you find a retroverted uterus with thickening in both broad ligaments, you have a right to assume that there has been some inflammatory process going on, a sepsis from some cause or other. If you find that the uterus is fixed in position, without finding any induration, you can conclude that the inflammation has been chiefly post-uterine, and that it is probably not due to any septic condition, possibly due to some inflammation of the peritoneum in Douglas' cul-de-sac, the result of cold, or some disturbance at the time of menstruation. If, in my own case, I find that there is no enlargement, no induration on either side of the uterus, I place my patient on the side and pass the sound, which, notwithstanding all that is said against it, is one of the most useful instruments I possess. If, as I was saying, you make up your mind that the trouble is post-uterine, you pass your sound and gently turn it in the anterior direction, in that way testing the strength of the adhesions. If you can raise the uterus beyond the promontory of the sacrum, and, in fact, into position, you can feel sure that the adhesions were of the slightest strength, and that they have given way under that moderate tension. If you can raise the uterus freely to the promontory of the sacrum without much effort, you can feel pretty sure that these adhesions are such that frequent tamponing will lead to success.

I might speak of one case I had of retroverted adherent uterus, where I worked with the patient over five months at her home, packing the vagina in the inter-menstrual periods with wool, well saturated with boro-glycerite. The uterus was firmly fixed by bands of adhesion, which I believe were not from a septic cause. I proceeded with this

¹Read before The Woman's Hospital Alumni Association, January 18th 1893.

treatment for months, until I utterly tired myself and my patient, and gave the matter up as a hopeless task. She went off to the country in June and returned home in September, two months advanced in pregnancy. I told her to wait a little longer, and I was positive I could put the uterus into place. At the end of about a month I examined her, and found the uterus filling the pelvic cavity. Using the Schultz method, with the index finger and the next in the rectum, and the thumb—of the left hand—in the vagina and with the right hand over the pubes, without any difficulty I raised the uterus into position, showing that the development of the uterus from pregnancy had softened the adhesions to such an extent that they readily gave way under the slight amount of force used. I inserted a pessary, which she wore for a short time. The rest of the history was uneventful. The child was born at full term.

And now, as to Schultz's method of treatment, I must say that my results in non-pregnant cases do not encourage a desire to continue it. In two of my cases I broke up some of the adhesions, but did not succeed in putting the uterus into position. The hot-water douche is of great assistance, especially in treatment of post-uterine adhesions, used in connection with the tampon. I wish also to say a word in favor of the instrument invented by Dr. Bissell, House Surgeon of the Woman's Hospital, which enables us to use the douche on the side.

Now, in regard to intra-peritoneal treatment. After the abdomen is opened, the treatment of ordinary adhesions about the ovaries is very simple. We need nothing more than the fingers, usually, to break them up. In cases of chronic salpingitis the matter is different. If there are extensive adhesions of the intestines, and these adhesions are firm, of long standing, I think the surgeon should be very cautious in the way he attempts to break them up; I have learned to treat them with the greatest respect. I do not believe that adhesions to the intestines should be broken up with the fingers unless they are recent. I think the scissors should be employed for that purpose, and in releasing these adhesions we should always be careful to favor the intestine, cutting away towards the inflammatory mass. In order to do this perfectly we should put the patient in such a position that there is not only the sense of touch at command, but that of sight also, and this can only be accomplished by putting the patient in the Trendelenburg posture. For myself, if, in a case of pyo-salpingitis, I find extensive, firm, intestinal adhesions, I never think of attempting to break them up. Usually in such a case I satisfy myself before opening

the abdomen whether there are probably adhesions, and I also satisfy myself by examination in the vagina whether there is a possibility of my getting at this mass by puncture with the trocar. Not more than six months ago I had a case which will illustrate this point. The woman was a patient who had lived a fast life in her early days in this city, and who had reformed and developed into a very fine woman and married a noble fellow. They went to Chicago on the wedding journey and while there she was taken with intense pains followed by high fever and was treated for typhoid fever. Dr. Boise, of Grand Rapids, was sent for, and found she was suffering from pyo-salpingitis, and told them an operation was necessary. As the husband felt he must return to New York, Dr. Boise merely aspirated and drew eight or ten ounces of pus, which relieved her for the time and enabled them to remove her to New York. She was referred to me. I found her with a temperature of 103 in the evening and suffering intense pain. Laparotomy was decided upon, and I found it impossible, on account of extensive adhesions, to remove the tubes. Both tubes were distended with pus and covered by firmly adherent intestines. The mass on the left side was very large, and I had nothing else to do but to sew up the incision and try to reach the abscesses from the vagina. I could only reach by the vagina the abscess on the right side. This I relieved by the use of a trocar and left in a rubber drainage-tube. The one on the left could not be reached at the time. After five weeks the rubber tube on the right side was taken out, and the sinuses healed without difficulty. About six weeks after this I found that the mass on the left side had so developed that I could reach it from the vagina, and I treated it in the same way, leaving in the rubber drainage-tube. I think it will result in a perfect cure, though there is still a small sinus that is discharging slightly. I have had several cases operated upon successfully in this way and I believe that in the future the method will become popular and possibly for cases that might be cured by the usual method of extirpation.

In regard to treatment of adhesions of ovarian cysts, those, of course, may be firm or may be easily broken up. The hand, usually, is sufficient without the use of anything else, and it is the same with fibroid tumors. But I leave this discussion here for those, who are to follow me, to fill in the many gaps that I am conscious I have made.

REPORT OF A CASE OF ECTOPIC GESTATION, WITH
REMARKS ON DIAGNOSIS AND TREATMENT.¹

BY JUNIUS F. SMITH, M. D.

Brookfield Centre, Conn.

There are but few subjects before the gynæcologist to-day which are receiving more universal attention than that of extra-uterine pregnancy and this, not alone on account of its relative frequency, but also because of its threatening condition, calling, as it does, for excellent judgment, and in many cases for the most heroic treatment. The case therefore which I present should be full of interest, showing as it does the dangers attending the conservative treatment, as now advocated by different authorities.

It is not within the scope of this paper to enter at any length into the general discussion of this class of cases, except as it bears upon the case herein mentioned; but more in particular to emphasize the necessity of an early diagnosis, and also to point out the danger and risk which the conservative treatment invites.

Mrs. W., an American with highly nervous temperament, aged thirty-six, had been married fifteen years, and never pregnant until within the last two years.

Menstruation had always been fairly regular, but attended sometimes with dysmenorrhœa. Being very anxious to become a mother, and up to this time having failed, she sought medical advice and began a course of treatment for displacement of the uterus and stenosis of the internal os. After undergoing a course of treatment in this city and in Bridgeport, she finally became pregnant and was delivered at the proper time; the child, though dead, was fully developed.

Not being satisfied with this result, as soon as her health would permit, she again sought the advice of her physician and resumed the former treatment until she again believed herself pregnant.

On June 4th 1891 I was hastily summoned to see this patient. The person who came for me said that Mrs. W., had fainted and fallen to the ground. I reached the house in about half an hour and found my patient lying on the lounge covered with a blanket, her countenance

¹Read before the Danbury Medical Society, December 7th, 1892.

was ghostly pale, extremities cool, pulse small and rapid, and pupils dilated.

To the question of what had happened she replied "that she was in the garden weeding the flower bed, had been there about fifteen minutes, when she was seized with a terrible pain in the right iliac region and knew no more until some time later she found herself in the position in which I had found her." Those who saw her said she screamed, fell forward on her face and was unconscious for four or five minutes.

The abdomen was somewhat distended and extremely sensitive, especially over the lower portion of the right iliac region; there was slight dulness on percussion.

In response to my question she said she believed she was pregnant, regular menstruation having ceased two months ago. At two or three different times, however, she had noticed a faint colored discharge from the genitals. She had also, at times, suffered from colicky pains which would oftentimes extend up to the epigastric region. She was very sure she was pregnant and was anxious to be assured that she would not miscarry. The breasts were sensitive and somewhat firmer. A vaginal examination at this time was refused, and yet with the facts of the case before me I was reasonably sure that I had to deal with a case of tubal pregnancy. Still this diagnosis was and could be but hypothetical not having had the opportunity of a vaginal to say nothing of the advantage and necessity of an intra-uterine examination in order to confirm the diagnosis without doubt.

Being fully aware of the nervous and almost hysterical condition of my patient, the fact that she was pregnant or believed herself to be and had but that day eaten heartily of green peas, I concluded to await developments and so look upon this disturbance as one of nervous origin from over-exertion accompanied with gastric disorder. I therefore directed that she be kept quiet in the recumbent position, hot applications to the abdomen in case pain was severe, and regulated the diet and bowels as the case demanded. I also left some powders of morphia and bismuth for pain and gastric disturbance.

At my visit on the following day, I found there had been no return of the pain, and the patient seemed better. The tenderness, however, in the right iliac region persisted. The next day she was so much improved except the soreness—as she expressed it—that I did not see her again until the 18th, when I was again hastily sent for.

When I reached the house I found my patient in great pain,

vomiting and having considerable show. I quieted her pain at once with a hypodermic injection of morphia and being quite alarmed hastily summoned council. The result of the consultation did not confirm my original diagnosis, and the idea still prevailed with my colleague that it was an obscure abdominal trouble complicated by the nervous disturbance. The treatment was therefore continued with special effort to control the nervous element.

Under my observation the case progressed for the following few days without any unusual symptoms, except that the pain continued more or less colicky in nature and the flow persisted; some large shreds coming away at times. On the 20th inst. she experienced another attack of the severe pain, with vomiting, a show, and rapid pulse. Her temperature now began to rise and the tongue take on a dark brown color and become very dry; the whole system gradually assuming a septic condition, the flow dark in color and quite offensive continued scanty and in intermitting discharges from the genitals. The temperature had risen to 101° and the pulse 130 and very weak. It became very evident to me that something must be done, and that at once. If she was not the victim of tubal pregnancy, she was then certainly suffering from what would appear to be a neglected abortion, with all the symptoms of a septic foreign body within the cavity of the uterus. This condition continued unimproved until the 23d, when Drs. Watson and Brown of this city saw her with me. After a thorough examination it was decided that, whatever the condition, it was apparent to all that longer delay would be dangerous, and that in any event the contents of the uterus should be evacuated. The patient at this time was extremely weak with all the symptoms of septicæmia rapidly developing. Temperature 102° , pulse 140. Her critical condition prevented the use of an anæsthetic. The vagina was thoroughly douched with a 1-2000 bichloride solution. Upon examination the cervix uteri was found to be enlarged and softened, the os somewhat dilated.

The os was then further dilated sufficiently to pass the little finger and an aseptic flexible catheter introduced and passed to the fundus without any obstruction, the length of the uterine cavity being nearly four inches.

The cavity of the uterus was then irrigated with a solution of bichloride 1-2000 bringing away a few shreds and some larger ones, which appeared to be portions of decidua. This completed the evacuation of the uterus and with the aid of the digital examination

and other concomitant symptoms made clear to us the diagnosis of a tubal pregnancy. Owing to the critical condition of the patient and her inability to safely take an anæsthetic, all idea of operative procedure was abandoned and the most conservative measures adopted. Perfect rest in bed in the recumbent position was insisted upon and the intra-uterine douche of bichloride 1-2000 was used daily or oftener as the case demanded. The patient was given a generous diet of milk, beef juice, etc., together with the medicinal agents necessary to support the powers of life and reduce the general adynamic condition.

During the following few days her condition remained about the same except that the rise in temperature was not so great because the intra-uterine douche was persisted in. The show continued and occasionally quite large pieces of decidual membrane would come away. The paroxysms of pain did not return in any marked degree and the extreme tenderness gradually diminished. The tongue became moist and quite clean, her condition now gradually improving. From the 26th of June and during the next thirty days her general condition continued to improve, the temperature ranging from $98\frac{1}{2}^{\circ}$ to $99\frac{8}{10}^{\circ}$ and an average pulse of 90 with improvement in character. The tenderness in the right iliac region almost wholly disappeared, though on pressure it could be produced.

The patient feeling so much improved now began to sit up in bed, and would, after a number of days, by the aid of an assistant, walk a few steps to a chair.

These small excursions would almost always produce more or less exhaustion and some considerable pain. The spurious flow which had ceased would again come on with little exertion, the douche now of from 1-5000 to 1-8000 or 1-10000 was continued, but less frequently.

The patient continued to gain with reasonable rapidity so that, with a competent nurse, my visits were less frequent. Occasionally she would send for me and complain that she "did not gain," that she felt a "sharp pain," a "smarting sensation," in the right iliac region. These symptoms I attributed to too much exercise, with corresponding irritation of the fruit-sac, and therefore cautioned her about being too active.

On the evening of August 22d I was hastily called to my patient. Her husband who came for me said she had that awful pain again, and he thought she was going to die. I hurried with all possible speed, but to no avail; my patient was dead.

I found my patient—who had probably died before her husband left

the house—with blanched face, dilated pupils and great distention of the abdomen. Those with her at the time said that she had walked from the chair to the bed, a distance of about four feet, when, as she was about to get into bed, she was seized with the pain and immediately became unconscious, from which condition she never rallied.

Autopsy.

The autopsy, made on the following day, was witnessed by Drs. Watson, Brown and myself, and the following points noted. The body was well nourished. There was no œdema. Rigor mortis well marked. A large amount of subcutaneous fat was found covering the abdominal cavity. The abdomen was moderately distended with gas. The uterus was found in about its normal position, fully twice its normal size. At the right upper portion a small inflammatory band bound it to the intestines. In the right iliac region involving the fallopian tube and the broad ligament, was a mass about the size of an orange. At one point of this mass the wall had become attenuated, and rupture had taken place into the peritoneal cavity. The peritoneal cavity contained from two to three ounces of clotted blood. The results of a local peritonitis involving the cavity of the pelvis on the right side below the psoas muscle were present. In the cardiac region, the heart muscle was thin and flabby. One-half ounce of fluid was found in the pericardial sac. The valves were normal and no signs of inflammatory action present. The right lung was entirely adherent, but otherwise normal. Left lung normal. The liver, somewhat softened, otherwise normal. Spleen enlarged and softened. Capsules of the kidneys adherent, otherwise normal.

I would say that on section this enlarged mass involved the tube and broad ligament. It was difficult to make out anything definite, though to all appearances it was organized blood and other substances of more consistency; absorption and degeneration had gone on to such a degree as to preclude any tangible evidence of a fœtus.

In my endeavor to give an opinion with regard to these cases and their proper management, I shall not attempt to speak of the etiology or pathology at any length but briefly follow out the clinical course of tubal pregnancy. That we may have it fresh in our minds let me ask what then is ectopic gestation.

It is the development of the impregnated ovum at some point outside the uterine cavity. This condition is especially liable to occur after a long period of sterility, after cases of long standing catarrhal

salpingitis, or any other condition causing dilatation of the fallopian tube; and yet this condition often supervenes in cases where the mother has borne several healthy children in the natural physiological order. Extra-uterine pregnancy may be of several varieties—as tubal, ovarian, abdominal.

Tubal pregnancy is the development of the impregnated ovum within the fallopian tube. The cause of this development within the tube instead of within the uterus is the arrest of the impregnated ovum at some point in the tube from partial occlusion, or from a denudation of the ciliated epithelium which lines the tube.

Now in tubal pregnancy the impregnated ovum may lodge in the tube in one of two places: a. 1. In the free portion of the tube; or b. 2. In the intra-mural portion.

a. If it develops in the free portion of the tube, statistics tell us that the tube will almost always rupture by the end of the third month. If so it will rupture into one of two places: 1. Into the peritoneal cavity; or, 2. Into the broad ligament. If it ruptures into the peritoneal cavity, it will, in all probability, terminate fatally, by hemorrhage or suppuration. If it ruptures into the broad ligament it will become a ligamentous pregnancy, and may go to term, when spurious labor will set in and the child in all probability will die. After the death of the child it may become absorbed, may suppurate, or may become a lithopædion. It may also become tubo-peritoneal by secondary rupture, which will, in the majority of cases, prove fatal to the child.

b. Now if it develops in the intra-mural portion, it is possible that the pregnancy may go to term without rupture, though in the majority of cases it will rupture before the twentieth week into the peritoneal cavity with fatal result. Sometimes, in all probability though rarely, it will be expelled into the uterine cavity.

In the case just related the ovum was probably arrested in the free portion of the tube with rupture into the broad ligament, and death of the foetus at the time of the first severe attack of pain during the second month. The subsequent attacks of pain were due, I believe, to further rupture, the increased tension from the increase in the accumulation of blood in the fruit-sac from the rupture of small blood-vessels and capillary oozing; degeneration and ulceration favor this condition.

Though it is held by some that the placenta in extra-uterine pregnancy continues to develop after the death of the foetus—which

would also account for the increased distention of the sac after foetal death—I think it a question yet undecided and one in which perhaps too much confidence is placed. I hardly think it does, but the increase in the tension of the sac by increase in the blood supply, by ulceration seems in many cases amply sufficient to distend the fruit-sac to such an extent as will produce secondary rupture partial and oft times complete, especially when the integrity of the sac wall is impaired during the absorption process.

Diagnosis.

The early diagnosis of extra-uterine pregnancy is very essential and all important, for upon the date of diagnosis the treatment is often indicated. It is imperative that it should be made at the earliest possible moment. The physician should thoroughly acquaint himself with and understand the condition of the fruit-sac and its contents. To be sure, in a larger per cent. of these cases the physician is called only when the pregnancy has advanced so far that rupture has taken place and the patient is in immediate danger. In these cases the subsequent management should be very plain. There can be no doubt but that cases of ectopic gestation are much more commonly reported now than in former times. Not, in all probability, because the condition is more usual, but mainly because in the light of modern medical knowledge the general practitioner is better qualified and more careful in diagnosis; consequently a very large per cent. of those cases formerly regarded as hæmatocele, pyosalpinx, localized peritonitis and obscure abdominal troubles are now quickly recognized as cases of extra-uterine pregnancy. An early diagnosis then being demanded in order to secure greater safety to the patient, what symptoms and phenomena shall be considered necessary to secure this end?

1. It is quite necessary that the patient should believe herself pregnant.
2. Suppression of the catamenia together with the other signs of pregnancy, mammary and abdominal.
3. *Pain.* Pain which comes in paroxysms, cramp-like, and originates in the region of the supposed sac, these paroxysms oftentimes attended with fainting, collapse and signs of internal hemorrhage.
4. Spurious flow, coming more especially at the time of the pain and in gushes, intermittent in character.
5. The physical signs—and these more in reference to the early months—would be the development of the uterus with accompanying

displacement according to the size and situation of the fruit-sac. The cervix usually patulous and dilated. Uterus empty. A tumor beside or behind the uterus of nearly fluid consistency tense and tender.

With all these indications at our command can we make a diagnosis of tubal pregnancy? With reasonable surety, yes; positively I think not. Is it not at times extremely difficult to diagnose a pregnancy normal in character at the second month, and oftentimes even later? What then are we to depend upon. Gentlemen, I believe you cannot make a *positive* diagnosis within the first eight weeks, and even later—without exploratory incision—until you have, by the aid of the curette or by spontaneous discharge, demonstrated beyond a doubt the presence of decidual casts having no foetal villousities. When you are sure of this, then there should be no doubt, and you should be convinced as to the nature of the case. To be sure, with all the other signs as above enumerated, and decidual casts or cells wanting, we may be reasonably sure of the condition, and yet the curette in the proper hands will cinch the diagnosis, and all danger of confounding this grave condition with enlarged ovary, ovarian cyst, or salpinx will be much reduced.

Treatment.

Having thus diagnosed the case as one of tubal pregnancy, what course of treatment shall be pursued? Shall we inaugurate the conservative treatment, using electricity to destroy the foetus? or, shall we indorse the more radical course and perform laparotomy? Before making a choice, it becomes necessary that the physician should fully appreciate the gravity of the case, be alive to all the dangers, possible terminations, etc., and thoroughly conversant with its clinical course and phenomena. If the physician is then fully master of the situation, his line of treatment will or should depend not only upon the diagnosis, as tubal, ovarian or abdominal, but more especially upon the degree of progress arrived at. How long is it since conception? This is important. Is the foetus dead, or alive? If dead, how long has it in all probability been dead? and what as to the present condition of the patient? These are vital questions and should find a ready response as to the future course of the case. I am disposed to the opinion that electricity has no proper place in the treatment of these cases, after the first five or six weeks; conservative treatment after this period being extremely uncertain and doubtful. Of course it has been used and may be many times again in cases much farther advanced, even to the third and fourth month, and with the best of

results but not without great risk. Can we, have we a right to, jeopardize the life of our patients by the persistent conservative measures when laparotomy of to-day is practiced with such marked success?

Those who shrink from the knife simply from timidity or prejudice have no right to do so, to the detriment and peril of their poor patients.

Nothing in this paper should be construed as depreciating the value of electricity in itself; far from it, but rather conservative methods, in dealing with cases whose greatest safety depends almost wholly upon the complete removal of their cause.

Electricity may very properly be considered, if we are to use it as an adjunct and a preliminary step to laparotomy, but as a substitute, its use is rightly questioned.

The danger in foetocide by electricity comes not from failure to kill the child, but from the disposition afterwards of the offending mass.

At the fifth or sixth week the growth of the foetal structures is not so great, but that in the majority of cases absorption and cicatrization will go on with reasonable security. As time advances it becomes much more difficult, and there is always imminent danger of rupture, secondary rupture after the death of the foetus, caused by over-distention of the sac and delayed absorption from mal-nutrition and other causes, resulting in ulceration of the sac wall and hemorrhage into the peritoneal cavity.

As with the case herein reported, under the most favorable circumstances, with the foetus dead at the seventh week, absorption and cicatrization did not go on successfully, and ulceration into the peritoneal cavity occurred at the twentieth week with instant death. The case also illustrates how easy it is to be misled as to the absorptive process; with pain, tenderness, abdominal distention, and all other unfavorable symptoms decreasing, with strength being slowly regained. Yet the dangerous condition persisted even to a fatal termination. In a conservative measure, then, up to the sixth week one may practice foetocide by electricity without puncture with reasonable success, and in order to accomplish this we may use galvanism or faradism, though in all probability galvanism is to be preferred. I think the course adopted by Prof. Charles Jewett of Brooklyn will be found as successful as any, and is as follows:

If faradism is used, place one pole on the abdomen over the tumor, with the other pole in the vagina or rectum, under the tumor, use the

full force of one or two cells, from one-half hour to one hour daily until the tumor shrinks.

If galvanism is adopted we may select the interrupted or the continuous current.

If we use the continuous current it will take one hundred to one hundred and fifty milliampères sitting fifteen minutes; if the interrupted, fifteen to twenty milliampères one hundred and twenty times per minute, one sitting, may suffice.

After the death of the foetus the most careful conservative measures are to be adopted, perfect quiet in the recumbent position insisted upon, with carefully regulated diet, etc., until the tumor has resolved, tenderness, distention, etc., disappeared, and all danger is past.

If at any time after the death of the foetus, signs of ulceration, secondary rupture, or sepsis shall occur, beyond immediate control, then the subsequent treatment should be obvious, laparotomy being the only safe procedure.

After the fifth or sixth week, with the condition of the patient favorable, the safest procedure in all cases is laparotomy. From this time on, operative measures should be strongly urged, for with complete removal of the offending mass, by abdominal section, the impending danger is at once obviated. It is not in any sense intended to convey the idea that the abdominal cavity can be opened with impunity, and without danger; far from it, but with a competent surgeon, having surgically clean hands, with properly sterilized instruments, and a clear knowledge of the technique, the danger is practically nil, as compared with that of a viable or non-viable foreign body within a sac which is distending, and which may rupture at any moment, thus placing the patient in a most hazardous position.

It is quite obvious that the earlier laparotomy is performed just so much will the danger attending it be lessened, for in these cases the danger from laparotomy comes not so much from sepsis, or tardy healing of the abdominal wound, as it does from hemorrhage, failure to control the placental site, owing to a lack of contractility of those tissues as compared with that of the uterus. This condition becomes more perilous as the pregnancy advances, insuring as it must a larger growth of the placenta, and a corresponding increase in the circulation of those immediate structures; it becomes imperative therefore to operate early, when the placental site can be more easily managed.

This fact alone would almost be sufficient to place conservative

measures in the back-ground and lead us to adopt operative procedure at the earliest possible moment.

Much may be said in favor of conservatism and indeed a few cases do go on to term with remarkable security, but it is not enough for the friends of conservative treatment to withhold operative measures simply because the patient is doing well. What security have they that the next twenty-four hours will find the patient in as favorable a condition? and if not, of what avail is laparotomy in cases where it suddenly becomes obligatory, because of complete or incomplete rupture great enough to cause death from shock or hemorrhage? What assurance have we that this foreign body will be properly taken care of by the absorptive process? Absorption and organization may go on well for a time and then suddenly cease: may cease from mal-nutrition, from secondary hemorrhage, from the disturbance in neighboring organs, local inflammations, peritonitis and many different causes of which we are not always aware—and degeneration, formation of pus and ulceration be the result.

Do you say that these phenomena will be attended by symptoms which will give warning sufficient to yet enable the surgeon to come to the rescue with the knife? Perhaps so in some cases, in others not so. It was not so with the case in question, though to all appearance her condition was favorable, with tenderness on deep palpation apparently gone, less than at any other time, strength and the general condition better, absence of marked pain while walking, etc. Yet absorption at one portion of the sac had stopped and ulceration was quietly doing its deadly work.

There may be some cases of ectopic gestation, no doubt, in which the condition of the system is such as to make laparotomy impracticable. In these cases conservatism is indicated, the patient's system should be generally improved, and the powers of life fortified. The treatment directed to the fruit-sac should be rest, and those measures adopted that will best allay accompanying inflammatory action. If in these cases rupture has occurred into the peritoneum, the diagnosis will be made easy by the presence or absence of a tumor in the broad ligament; here immediate laparotomy is indicated. If laparotomy is impracticable (?) in cases of rupture into the peritoneum, treat by rest, sand-bags on the abdomen over the fruit-sac, and you may also use compression of the aorta if hemorrhage is imminent.

THE FIRST SYMPHYSIOTOMY ON THE PACIFIC COAST.

By H. R. HOLMES, M. D.

Portland, Ore.

Mrs. B., age 23, primipara, had been in labor nearly 60 hours. I was called, March 3, to see her with Drs. G. O. Jefferson and Mae H. Whitney of Portland. The pains which had been vigorous had now died away, and the patient was becoming exhausted. The head occupied the first position and had not engaged. The foetal heart was rapid and somewhat irregular; cervix dilated to size of a silver dollar, soft and dilatable. The conjugate vera was about three inches. In preference to doing either craniotomy or the Cæsarian section, I decided to perform symphysiotomy in hopes of saving both mother and child. The abdomen was shaven and scrubbed carefully with soap and brush; bi-chloride solution (1-1000) was freely used; but haste was deemed important, even in the antiseptic preparation, as the child's heart was becoming more irregular in its action. An incision was made, reaching to the symphysis. The attachments of the recti muscles were severed sufficiently for the introduction of the index finger to serve as a guide behind the pubes. An assistant, by means of a sound, depressed the urethra, at the same time holding it to the right. The cartilage between the bones was cut through with a scalpel (Galbiati's knife not being at hand) from before backward and from above downward. Much ease was experienced in incising the cartilage, excepting that considerable care was required at the lower part of the joint lest the soft parts beneath might suffer. There was complete uterine inertia, and the forceps were used by an assistant to extract the child, during which time the pubic bones separated more than one inch and a half. The child was resuscitated in about half an hour by active work.

The perineum was torn down to the sphincter and was immediately repaired. The perineal and abdominal wounds were sutured with antiseptically prepared silk, a many tailed bandage firmly embraced the pelvis, readily coaptating the pubes. This, it was understood, would soon be exchanged for a firmer dressing, and the patient was returned to bed.

To-day, just six weeks after the operation, Dr. Whitney, who has

recently seen the mother and child, informs me that both are quite well in every particular.

The subject of symphysiotomy is to me quite interesting, as I heard Dr. Harris' paper read before the American Gynæcological Society last September, am personally acquainted with Professor Charles Jewett who did the first symphysiotomy in America, and have enjoyed the privilege of doing the first operation of the kind on the Pacific Coast. I believe that it will, in its simplicity, render unnecessary the always dangerous Cæsarian section to a very great extent.

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EDITORIAL.

THE WOMAN'S HOSPITAL ASSOCIATION.

An article of very great interest to all our readers heads the list of original communications in this month's issue. In it are depicted graphically by one of the principal actors in those scenes the inception, the early struggles, and final triumph of the first hospital exclusively devoted to the diseases of women of which history furnishes a record. The founding of this institution, then, was an epoch in medical science; and the brilliance of its conception and the lustre of its successful founding and triumphant progress can not be over-estimated by the profession at large. It raised the practice of specialties, and particularly that of gynæcology, from a precarious footing in quackdom to a position of the highest honor and scientific repute. It is to-day not only the mother of all other special hospitals of this kind, but it furnished the direct stimulus as well as the fundamental principles necessary to the development of modern gynæcology throughout the civilized world. It *wrested* from the hands of the general practitioner a class of diseases concerning which the crassest ignorance had up to that time prevailed and, through the appreciation and practical illustration of the great surgical possibilities contained in this new specialty, it conferred the greatest boon upon the development of modern general surgery.

From its beginning the Woman's Hospital stood as the exemplar of American gynæcology, and this position she maintained unchallenged until within a very few years, when the ideas she had inculcated in

this country and those she had promulgated abroad bore fruit and returned to form many foci of independent and valuable thought and practice. Her wards and operating-rooms were a laboratory in which were conceived, practiced, maintained or rejected, nearly all the plastic as well as many of the abdominal operations and the methods of local treatment which have been practiced or are now in vogue.

Much which was here first invented has since, through the natural process of evolution, been rejected by its originators for something better, as a clearer knowledge of anatomical and physiological laws and of their application to the mechanism of gynæcological organs was reached. So much did the Woman's Hospital invent and teach, in the many years during which it stood alone and unique among hospitals, that this evolution and the wonderful fecundity of ideas which it produced are hardly appreciated by many of those, even in this country, to whom all this has become a heritage.

It is not, then, to be wondered at that recently, owing to the great activity of European surgeons consequent upon the discovery and perfection of methods of asepsis, the influx of clever and energetic foreign surgeons among us, and our national weakness for novelty especially from abroad — it is not to be wondered at — that many of the old and rejected children of the Woman's Hospital have returned to us, displaying with their new names and painted faces all the freshness and charm of youth.

But we cannot justly accuse our foreign brethren of conscious plagiarism, for these contributions of theirs are not infrequently evolved from independent though long subsequent, and therefore not original, thought. Nor, when Americans themselves cannot recognize their native products, can we blame foreigners for a far more excusable ignorance. Among the most popular *belles* who have recently returned with foreign titles to our gynæcological society we may mention, and we speak advisedly, the Tait flap-splitting operation, curettage and drainage, and nearly if not quite all plastic operations for the relief of the various injuries to the cervix, anterior and posterior vaginal walls.

This extraordinary ignorance concerning that in which we should take the greatest pride is largely fostered by the vicious practice of encouraging callow medical graduates to take their first view of practical medicine in the hospitals and clinics of Europe. Densely ignorant of everything anent their profession save the little of theory which three years of dabbling in certain prescribed text-books may give them, and with the traditional self-appreciation of the "diplomatized" medical

student, the majority of these present to the humorous foreigner an amusing, but to the man of feeling a pitiable, spectacle of lambs astray. Quite incapable of instituting those intelligent comparisons between foreign and domestic work, which alone makes profitable or decent a course of study abroad, they return to this country, *unnaturalized American physicians*, to build a foreign superstructure upon a foreign foundation and exhibit the indifference if not hostility of ignorance toward every product of American genius, unless it first receive the *imprimatur* of their foreign teachers. It is seldom that these men ever recover; they are taken too young. It is the story of the Janissaries.

A few years ago we met in the streets of Vienna a country-man of ours who had already spent one year in varied medical research in Germany and Austria. He had informed me that within a month of his graduation he sailed the sea that he might properly fit himself for the practice of his profession. On this occasion he was full of enthusiasm and insisted upon informing me of a remarkable procedure he had just witnessed in his course in pathology. I was prepared for much but scarcely for a detailed description of how those "wonderful Germans" had with the simple aid of a saw, mallet and chisel opened the spinal column of a cadaver and removed entire and without a break the spinal cord. "Ah!" he said, "we are way behind in America. I told the Germans so. Lord! Won't I make them open their eyes when I get back home!" I preserved decorum to the end of his story — nothing would have availed — and congratulated him on his "find". And yet this man was *not* an idiot and *was* a graduate of the College of Physicians and Surgeons in New York. Thus does foreign glamor overmatch Yankee shrewdness both at home and abroad!

But apart from the early "Reminiscences" of the institution itself the vivid pictures of the men and women connected with the Woman's Hospital Association, of the city and of the times in which they lived, are of no less historical value. The loving tribute to Mrs. Doremus and that to Margaret Brennan the nurse, the just and admiring portraiture of Dr. Sims and of his work, the humorous though kindly description of Dr. Stevens and Dr. Francis, are altogether delightful and take us back to a world of thought and manners which has ceased to exist. It is the world of Thackery and of Dickens. Let us thank God, however, that the days in which a pompous manner and a gold-headed cane were the requisites for professional success are gone forever — the days of little knowledge and uncertain experience, of self-consciousness and "bluff"!

Yet it was to the teaching of these men—the last of the old *régime* and old themselves when the Woman's Hospital was conceived—that we owe the great lights of modern medicine and surgery. They followed the light which they had and added to it for our inheritance, and they maintained the dignity of the profession, foolishly sometimes but efficiently, so that it might be to us a mantle of honor. And so, though we may laugh at them, at their foibles and assumptions, as the future will laugh at us, it is not ungrateful laughter but rather touched with pathos.

In the profuse and excellent illustrations which accompany this article we have endeavored to present the subjects at or near their age when connected with the Woman's Hospital Association. They are all copied from photographs or engravings taken about that time. Particularly is this true of the illustration of Dr. Sims which is copied from an old photograph for which he stood two years prior to his departure for Europe in 1860. It is hard to recognize in this the remarkably handsome man Dr. Sims appeared after his return from Europe and in those later portraits which are familiar to all. Nevertheless it is this contemporaneous character, though not always flattering, which lends, in our opinion, their greatest interest to our illustrations.

REVIEWS.

ANESTHÉSIE CHIRURGICALE ET OBSTÉTRICALE. Par A. AUVARD ET E. CAUBET. Paris, pp. 268.

SURGICAL AND OBSTETRICAL ANÆSTHESIA. By A. AUVARD AND E. CAUBET.

This little work belongs to the same "Medical Library" as Sinéty on Sterility, noticed in our February number, a series of brief practical manuals by writers of standing and ability.

The surgical part of the volume cannot be considered a success. It has failed just as many similar treatises in our language have failed. To present and describe in a book of this size every agent ever used for the production of anæsthesia and all the different combinations of them, to decide upon their merits and at the same time satisfactorily consider the great leading agents and their administration, is an impossibility.

Obstetrical anæsthesia alone concerns us. And, first of all, we

must express congratulations that there is, in France, such a thing as anæsthesia in the lying-in chamber. No country of the civilized world was so slow to receive this boon to the parturient woman, nowhere did it find such bitter and persistent opponents. The discovery was welcomed by Italy and by Germany; France and Belgium not only held back but opposed it with a zeal intensified by religious fanaticism. The great obstetrical leader of the time, Paul Dubois, gave it but a luke-warm welcome, and the recognition of obstetrical, as distinct from the deep unconsciousness of surgical, anæsthesia was not made in France until 1854 by Houzelot. The alleviation rather than the abolition of pain, demi-anæsthesia, was again presented by Blot in 1857. But then came the powerful and official influence of Depaul in 1864, and Pajot in 1866, against the process. But the affirmative was ably maintained by Campbell, a Scotchman, who for thirty years administered chloroform in Paris, warmly advocated it, and repeatedly advocated in print its safety and its advantages. There is nothing in the history of medicine more striking than the action of Pajot in this matter. The persistence and positiveness with which he denied that there was such a thing as demi — or obstetrical, as distinct from surgical, anæsthesia is astounding, when it is considered that a single clinical observation might have proved its reality. For certainly the woman's testimony ought to be worth something! But Pajot, held that alleviation of the pain of labor by chloroform was a pretence on the part of the physician and a delusion on the part of the patient.¹ He not only denied but ridiculed, and classed this alleviator of woman's sufferings with medals of saints, "the feather of an eagle to the thigh, and the fat of vipers applied to the belly!" It was "one of the errors of Simpson, an *esprit* more brilliant than judicious."² Had he but read Simpson or our Channing, or the contributions of Burwell of Buffalo! All of these wrote in 1848, all of them distinctly pointed out and insisted on the difference between surgical and obstetrical anæsthesia.³

Thanks to Piachaud at the Geneva Congress, 1877, to Courty, to Fredet,⁴ to Bailly and to Dutertre,⁵ the cause of obstetrical anæsthesia

¹ *Le Chloroforme dans les Accouchemens Naturels*, 1875.

² Pajot resorted to anæsthesia (surgical) for obstetrical operations without hesitation. His mode of determining the insensibility of a patient was effective, although perhaps scarcely adapted to this country: "*Je prends trois poils à la vulve, et je tire!*"

³ "The possibility of exhibiting chloroform to a point short of causing insensibility or interfering with the full use of all the faculties * * * and yet so benumbing pain as to make it quite easily bearable."—*The Use of Chloroform in Midwifery* by GEO. N. BURWELL; pamphlet. Burwell has never yet received just recognition.

has triumphed even over the later opposition of Tarnier and Caseaux. It has conquered for itself a place in daily practice but has not even yet succeeded in establishing itself, this book informs us, in the official curriculum of instruction. And this nearly half a century after the demonstration of the efficacy of this means of alleviating the sufferings of child-birth! France has many brilliant pages in her medical history; this is not one of them. She can proudly boast of much good work in advancing medical art and medical science; she must be silent as to her reception of one phase of the greatest discovery of modern medicine—its recognition was forced upon her largely by a foreigner dwelling in her capital.

Obstetrical anæsthesia is in this work, as almost everywhere else, by the action of chloroform. As to the other agents, from nitrous oxide down to cocaine locally, there is little to detain us. One case of marked delirium produced by bromide of ethyl is reported here. Ether, because of its inflammability and the necessity for an apparatus, is curtly dismissed. Hypnotism, however, occupies considerable space—ten pages, and has evidently been carefully studied by Dr. Auvard who refers to his larger work for further information.⁴ As presented here the subject is deeply interesting but the facts presented are not such as to encourage a resort to it. In the first place, susceptible patients are few in number; they are, generally, “women markedly subject to hysteria, and having been submitted previous to labor to several séances of hypnotism.” A certain disposition of mind on the part of the subject [entrainment] is necessary. “The hypnotisable tend to exaggerate pain which the slightest remedies allay and cause to disappear.” Finally, “the most expert must not be surprised if he make mistakes in his choice of subjects.” The modes of affecting the patient are various; no particular one seems necessary, and three conditions are produced—lethargy, catalepsy and somnambulism. The first and last have alone furnished instances of success in obstetrics, and suggestion seems to be frequently necessary, the patient is to be strongly assured that she does not suffer. The course of the labor is said to be but little affected; the recurrence of the pains is somewhat slowed. The results given are no more encouraging than might be expected. The author reports thirteen observations; of these four

⁴De l'Emploi du Chloroforme dans les Accouchements simples, etc., etc. Paris, 1867.

⁵D. l'Emploi du Chloroforme dans les Accouchements naturels. Paris, 1882.

⁶Travaux d'Obstetrique, t. I.

failed entirely, in four success was complete, and in the others partial. "Hypnotism is, then, an unreliable anæsthetic; * * * in obstetrics it merits no great confidence."

The section upon chloroform in obstetric practice suffers as do other important facts of the book; it is crowded by far less important parts of the subject into the narrowest possible limits. Nevertheless it is well, if briefly, presented. Upon the three leading points of obstetrical anæsthesia the authors are clear and what they have to say in regard to them cannot but prove interesting.

The first of these points is as to the safety of the process. There is not a doubt expressed as to this, or a particle of adverse evidence adduced. As to the cause of the peculiar and marked safety of anæsthetics during parturition the authors only give pregnancy, *per se*, but quote with approval Campbell's doctrine of the influence of effort. Undoubtedly several factors are concerned in the problem. This may be said as to the danger: were there any appreciable amount it would not have been overlooked in France. The enemies of the process were implacable and they were men who had large experience with surgical anæsthesia for the operations of obstetrics; they denied the amelioration of pain, demi-anæsthesia; they ridiculed it, as we have seen; they did not advance the more potent argument that it was dangerous.

The second point is: does chloroform diminish the frequency and force of the uterine contractions and thus favor hemorrhage? Admitting the difficulty of deciding upon this point, the pains sometimes ceasing when the anæsthetic has not been given, the verdict is rather in the negative. A tendency to this effect should always be impressed upon the student, we believe, and borne in mind by the practitioner. It is in direct proportion to the depth and prolongation of the anæsthesia. So far as demi-anæsthesia is concerned its influence in this direction is very slight, and is fully counterbalanced by the greater efficiency of the contractions under an anæsthetic when the suffering is more than usually severe.

Should chloroform be administered to a patient suffering from cardiac disease? There is great unanimity of opinion upon this point among all writers upon the subject from Snow down, and we find no dissent here. One of the authors administered chloroform to a multipara with a double mitral lesion for eight hours and even to the surgical degree. No hemorrhage followed the third stage although in two previous deliveries it had been marked. It is curious to read after

this in the *résumé*, that chloroform should not be given where there had been preceding floodings! The other formal contra-indications given are: First, when the pains are not severe enough to demand relief, which is often the case among the laboring classes, and second, when the anæsthetic does not effect any notable amelioration of suffering. We never saw a case of this kind and cannot believe that such exists.

We have indicated the most notable features of this work. It is valuable more as showing the status of obstetrical anæsthesia in France than as a treatise upon the subject. The contributions of writers in our language are frequently quoted. There are some lapses, however; Simpson did not administer chloroform to the queen, and it would be difficult to say who is meant among our countrymen by "Boodwitsch and Mint."

J. C. R.

A SYSTEM OF GYNÆCOLOGY, based upon a translation from the French of SAMUEL POZZI, M. D. Revised by CURTIS M. BEEBE, M. D. Complete in one volume, 359 illustrations. Price, cloth \$6.00; sheep or half morocco \$7.00. J. B. FLINT & Co., New York.

In reviewing this work it must necessarily be compared to the more elaborate translation by Brooks H. Wells, M. D., and published by William Wood & Co., as they must bid together for popularity with the medical public. From the standpoint of a bookmaker it falls far short both as to binding and materials used.

The translator does not venture a preface and therefore we cannot speak of his claims for it. In the text there seems to be but little abridgment, the differences noticed being chiefly such as might occur between any two translators. The subject matter needs no comment as it has been so fairly reviewed in all the leading journals. It is divided somewhat differently, making fifty-one chapters instead of the forty-eight of the Wood publication.

The two chapters on "Diseases of the Urinary Tract" and "Diseases of the Rectum and Pelvis," by Avand, are omitted; but this can hardly be criticised as they do not properly come under a translation of Pozzi's work. There are but 359 illustrations against 479 and no plates, but this is accounted for by additions in the latter work by the translator. These additions as well as his notes make the Wells' edition of interest and value to the American student.

The illustrations are in the main fair, but some of them are bad, *e. g.*, Fig. 111, "Vaginal Hysterectomy," page 229, and Fig. 113, page 233, also Fig. 154, page 285, "Figure of high pessary."

The book contains no index or list of illustrations and no bibliography. This alone is enough to condemn it either as a work of reference or for the use of the student.

Some unimportant typographical errors are noticed. L. G. B.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, March 7, 1893.

W. G. WYLIE, M. D., Vice-President, and later GEORGE TUCKER
HARRISON, M. D., President, in the chair.

A Remarkable Case of Vesico-Vaginal Fistula.

Dr. H. M. SIMS reported such a case and exhibited photographs of the patient.

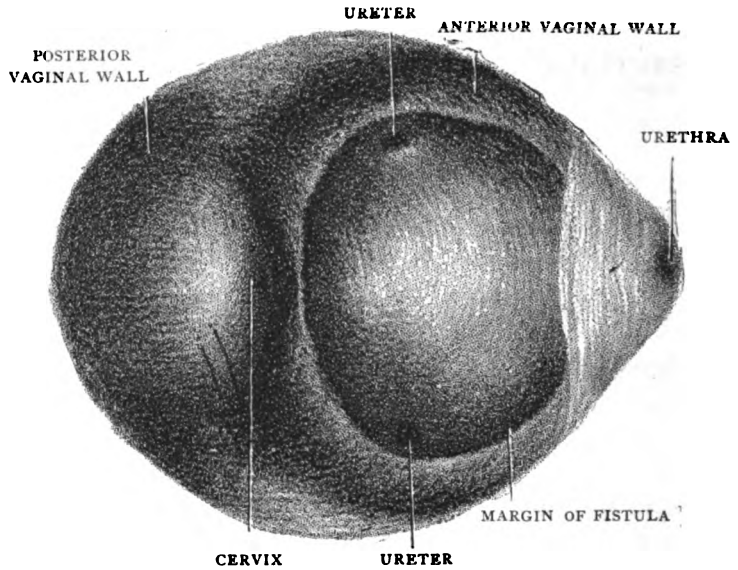
This unique case of vesico-vaginal fistula was referred to me by my friend, Dr. Niles, of Carbondale, Pa., for operation.

Miss X., aged twenty-one, was confined three months ago; was in labor for fifteen hours before instrumental delivery was resorted to. The girl was deformed, and only about four feet six inches in height, long body and short limbs, and extremely simple in intellect. I made an examination of the case on her arrival here, but found the parts so very sensitive that I had to administer ether to make a thorough examination. The illustration gives a very good idea of the case. The anterior wall of the vagina and the base of the bladder are entirely destroyed, leaving no vaginal margin either laterally or antero-posteriorly. The obliteration is as complete as though it were done with a punch. This permits the upper and posterior walls to exert themselves through the opening where the base of the bladder formerly was, and there, in full view are the two ureteral openings welling up with urine every few seconds.

An operation on such a case being out of the question I could only send the poor girl back home again.

Dr. W. R. PRYOR said that he had had an opportunity of seeing

this case, and the only suggestion he had to offer was that possibly a procedure once adopted by Pawlik—the removal of the entire bladder and the bringing down of the ureters and fastening them in the vagina—might have been of benefit, for if nothing were done, in all probability there would be a violent inflammation and sloughing of the bladder.



CASE OF VESICO-VAGINAL FISTULA, EXHIBITED BY DR. SIMS.

Dr. G. M. EDEBOHLS said that in some of these very bad cases of vesico-vaginal fistulæ, where no procedure from the vagina would suffice to bring the edges of the gap together, the opening might still be closed by performing suprapubic cystotomy and closing the fistula from the bladder side. The suprapubic method offers the great advantage that even if one could not draw together the vaginal wall sufficiently to close the entire aperture, one can still close the opening by liberating the mucous membrane of the bladder itself from its vaginal and somewhat also from its bladder connections. It is a

procedure the possibility of which should not be lost sight of, as it will often succeed when no vaginal operation is practicable.

Dr. A. F. CURRIER said that in cases of this kind, where the outlook for a vaginal operation is so hopeless, complete closure of the vagina, as suggested by Dr. Pryor, even if combined with a mutilating operation on the uterus, would be perfectly justifiable. He also had seen the case just reported, and had been greatly impressed with the patient's peculiar structure, mentally and physically. The long axis of her head was parallel with the plane of her face, her face was square and her arms and thighs were extraordinarily developed, while the fore-arms and legs were quite small. This raised an interesting question as to the relation of her peculiar conformation with her strange antecedents. The subject of in-and-in breeding, of which this was an unusual example among human beings, had received careful attention from stock-breeders in recent years, and while close-bred varieties, like the Jersey, might show the advantages of such a plan in an exaggerated lacteal function, it was at the expense of the general vitality. Recent writers on the subject of consanguineous marriages have contended that close breeding does not necessarily bring on the mental defects, which are so often observed in the offspring of such marriages, but that it is rather similarity of qualities in the parents which is responsible for such defects. In illustration of this they cite certain well-known facts in ancient history—for instance, that at the time when Egypt was most prosperous, it was extremely common for Egyptian brothers and sisters to marry, and so far as is known their offspring were normally developed. However that may be, a case like the one under discussion shows that there may be very undesirable results, both mental and physical, from such utter violation of the social customs of civilized society.

Dr. W. G. WYLIE said it was remarkable that in a uterine service as large as that in Bellevue Hospital, that cases of vesico-vaginal fistula were not more common, yet he saw not more than one or two such cases a year. The photograph just exhibited reminded him of two cases which he had had in the hospital; in one there was a tear of the vagina and bladder, extending from the cervix uteri to the meatus urinarius, and much tissue was lost. After several operations he succeeded in completely closing the bladder, but he was not sure about the ultimate result. He had never seen before this the re-formation of the urethra and reunion of the bladder. The second case differed from this one only in the existence of a small band at the base of the

bladder the size of a lead-pencil, which greatly facilitated the closure of the rupture. He could easily understand how such a reparative operation could not be done in the case reported this evening. Vesico-vaginal fistula is probably not so common at the present time, because the forceps are more promptly used, and hence there is not such severe and prolonged pressure on the soft parts as occurred in former times.

Dr. SIMS, in closing the discussion, said that as the tissues did not yield at all, even when seized with a tenaculum, it was evident that there was not enough tissue for any such reparative operation, and in all probability the methods suggested by Dr. Pryor and Dr. Edebohl would not have been successful on account of the patient's peculiar physical condition. As to the rarity of vesico-vaginal fistula, he attributed this largely to the fact that post-graduate instruction was much better now than formerly, so that country practitioners were better informed as to the proper methods of treating such cases.

Drainage in Operations for Pyosalpinx.

Dr. W. R. PRYOR presented a specimen of pyosalpinx.

He said the other tube had been operated upon by a colleague six or seven years ago for a small cystoma the size of an orange, and drainage had then been employed according to the method at that time in vogue; but adhesions had followed this operation and had caused an occlusion of the other tube. Probably a retention cyst first formed, and this afterwards became purulent. The question of drainage is very important in view of the possibility of ventral hernia and formation of such adhesions causing occlusion of the tube or intestinal obstruction. In removing thirty-two other cases he had not drained at all, and inquiry showed that in some of the clinics abroad, no drainage-tube was used, and no gauze-packing except where new tissue had been broken into. The specimen was presented to show that drainage in operations for pyosalpinx is seldom if ever indicated.

Dr. EDEBOHLS said that he had never employed drainage to any great extent and could not now recall having drained any case in the last year or two. In cases where a pyosalpinx ruptured into the peritoneal cavity, he had occasionally resorted to washing out the peritoneal cavity, but even this he had almost entirely abandoned. In operations for pyosalpinx it was his custom to place sterilized cloths over the intestines and deep down into the pelvis, so that if rupture occurred while separating the pyosalpinx, the pus could be caught and removed. This he always did under the guidance of the eye, the

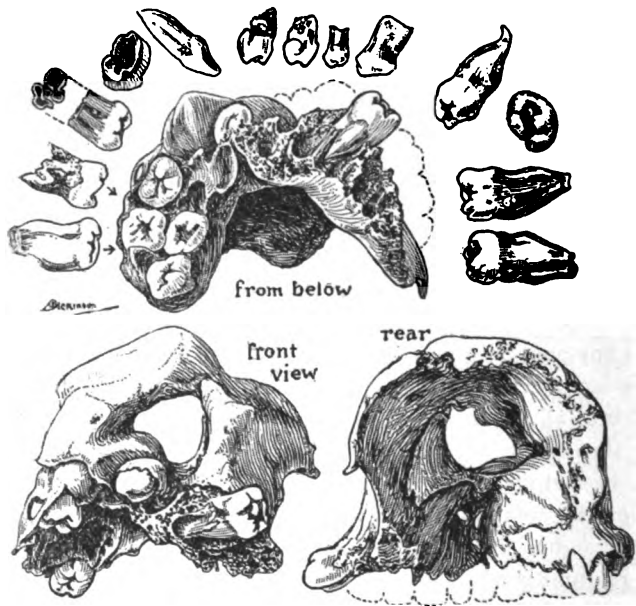
patient being in the Trendelenburg position. Cloths wrung out of a 1-500 or 1-1000 sublimate solution were applied to the bed of the pyosalpinx after removal of the latter care being taken not to touch the intestines; these surfaces were subsequently dried and the wound closed without employing flushing or drainage. His results had been better since the adoption of this method. On the whole, the less drainage the better the result to the patient, both immediate and ultimate.

Dr. CURRIER agreed with the preceding speaker that we were at present passing through a stage of evolution in this matter of drainage. He had formerly taken the position that if there were a likelihood of suppuration occurring in the pelvis, we could treat it more intelligently by inserting a drainage-tube; in a number of cases so treated, troublesome fistulæ resulted, though fortunately all were now cured. The necessarily prolonged treatment of such fistulæ is likely to prejudice the people strongly against modern abdominal surgery. At present he took the ground that there were very few cases of pyosalpinx in which drainage was required, notwithstanding that some men of very large experience still insisted on draining nearly every case. The drainage-tube is likely to be resorted to less and less frequently in operations for pyosalpinx, but in cases in which there is general peritonitis or diffuse suppuration in the pelvis, or anticipated hemorrhage, it is not safe to dispense with drainage in some form.

Dr. H. M. SIMS was in perfect sympathy with those who had already spoken. Six or seven years ago he was himself a very enthusiastic advocate of drainage and drained almost every case in which there was any possibility of oozing of any kind in the abdominal cavity; but in the last three years he had almost entirely discarded it and had not used it at all for the last two years. During this latter period, even in the cases of pyosalpinx where the sac had unfortunately ruptured, he had contented himself with flushing out the pelvic cavity with Thiersch's solution, and as our experience increases, he thought he would abandon the drainage tube entirely except in those cases of purulent peritonitis which may be subjected to operation.

Dr. W. G. WYLIE did not wholly agree with what had been said. The main object of abdominal surgery in his opinion is not to simplify an operation but to secure the best results, and if these can be had by taking more trouble, then he was willing to take the trouble. He did not resort to drainage as much as formerly but would continue to drain in many cases until he saw better results without drainage than

with it. He had operated on seventy-eight or seventy-nine consecutive cases of pyosalpinx without a death, and in a large percentage of these drainage was employed. He had never had a case of this kind in which he had found it necessary to abandon the operation on account of the difficulty of removing the pyosalpinx, but in these severe cases he considered it preferable to use drainage at least for a short time. He did not now hesitate to operate even on cases of peritonitis just as soon as he thought pus was present, even though the temperature were as high as 105° ; but in these cases drainage seemed absolutely necessary as there were so many different collections of pus in the pelvis. He could distinctly recall two patients whose lives he had saved by using a drainage-tube for only a few hours as a precaution against hemorrhage, and unless he could be shown cases which had died as a result of drainage he would continue to use it. The drainage tube is an advantage because in any case septicæmia may occur, and



SUPERIOR MAXILLA WITH 16 TEETH FROM DERMOID CYST.

if it does occur and there is a collection of blood or serum in the pelvis and no drainage, there is certainly more danger to life than if there is drainage. Some years ago, before the introduction of the drainage-tube, when a septic condition developed he would examine the pelvis carefully for a collection of fluid, and if such a collection

were found, he would tap it from the vagina—in other words, he introduced a drainage tube from below; but if there had been a drainage-tube inserted at the time of the operation, this collection of fluid would have been smaller, and hence the danger to the patient correspondingly diminished. Drainage had certainly been abused, but a resort to it for a few hours is an additional security.

Superior Maxilla with 16 teeth from Dermoid Cyst.

Dr. R. L. DICKINSON presented a very complete superior maxilla in which the teeth were nearly all in place when removed from a cyst fixed behind the uterus—in which nearly all the other contents had been absorbed—the case is presented because of the unusually complete development of the anomaly.

Dr. PRYOR remarked that he had a theory that these dermoid cysts represented attempts on the part of the ovule to reproduce the species with an abnormal impulse. He believed they were always monocystic.

The Operative Treatment of Pelvic Abscess.

Dr. R. H. WYLIE read a paper on this subject. (See page 369.)

Dr. PRYOR thought the treatment described in the paper very nearly a classical one except as regards cases opening in the bowel and regarding puncture through the vagina. The first class he did not think at all amenable to coeliotomy, and on looking up the literature of the subject he found a mortality of about seventy-five per cent. attended the operation in cases where a fistula existed at the time of operating. It seemed to him that the indication was if possible to close the rectal opening before operating. Puncture through the vagina in such cases is proper if one can be sure of the locality of the abscess tract and if it might tend to the closure of the rectal opening. These cases are pre-eminently inoperable when they open into the small intestine about the middle, because then the patient will die of starvation. Routine puncture through the vagina in pyosalpinx he thought inadvisable and could but complicate the subsequent coeliotomy, for it is practically impossible to render the vagina aseptic when pus is discharging into it; he had not yet seen a case of pyosalpinx which seemed to him to require this treatment. Flushing of the peritoneal cavity did not remove the pus in his opinion as well as wiping it away, as the flushing tended to disseminate the septic matter. Moreover, if flushing is done a drainage-tube must be employed, and this has many dangers.

Dr. CURRIER was inclined to believe with the last speaker that the author placed himself in a rather illogical position in recommending so freely the use of the trocar in opening abscesses through the vagina. He probably found very few cases in which there was not also disease of the appendages. It had been stated that there were some who recovered and bore children, and this perhaps justified the operation, but he thought the experience of most of the members would lead them to concur in recommending that the most intelligent and least dangerous treatment for abscesses with which the appendages were associated, was the use of the Trendelenburg position and abdominal section, rather than operating blindly through the vagina.

No particular mention had been made of the method of treatment by puncturing through the rectum. Undoubtedly there were some cases which could be most effectually treated by that route and, while it was not as a rule a desirable method, it was the only course which could be employed in a certain number of cases. He had found that the Sims' sigmoid catheter was a valuable aid, or perhaps two of them as a drainage-tube in cases in which an opening was to be made in a pelvic abscess.

Another method of treatment not touched upon in the paper was incision into the ischio-rectal fossa on each side in that class of cases in which an abscess extended down under the cellular tissue and on either side of the rectum. He had had one such case which he had treated very satisfactorily in this manner. He thought we could not give up the idea that there is such a thing as inflammation of the cellular tissue of the broad ligament. In a certain class of cases which are infected soon after labor, there is unquestionably a lymphangitis which goes on to suppuration, and if the abscess formation is extensive it is safe to say there is a true history of cellulitis.

Dr. EDEBOHLS thought it would not be right to allow this occasion to pass without commending in the highest terms the spirit displayed in the paper—the spirit of individualization or the attempt to analyze each case thoroughly, and to do the best possible for that particular case. He had had a large personal experience with suppurative processes in the pelvis, and there could be no question that they occur in the puerperal condition in the pelvic cellular tissue, but apart from this condition he had never seen a true pelvic abscess, namely, one starting primarily in the cellular tissue of the pelvis. We sometimes see them quite soon after labor, and the treatment requires much judgment, for these patients have already passed through an acute septic process and are not therefore in a favorable condition for any

capital operation. Even anæsthesia is dangerous here, and the tissues themselves are so degenerated and friable that under these circumstances the method advocated by the author—that of puncture, and allowing the patient to gain some strength with a view to a secondary capital operation—is certainly in the line of good surgery. Personally, he did not favor the use of the trocar, and he had never used it through the vagina. In cases where the author would use the trocar, he would prefer to evacuate the abscess by incision by way of the nearest and safest route, very frequently the vagina, and in doing so he had obtained a larger opening than is usual with the trocar, and one that had the advantage of freer drainage. He also preferred the use of a T-drainage-tube of soft rubber, and the incision should be large enough to allow the easy passage of such a tube; then there is no necessity for stitching the tube to the cervix. Another method which is sometimes feasible, if the abscess wall is a distinct and moderately strong membrane, is to stitch it to the lips of the vaginal incision; in this way even a tube can be dispensed with. He objected to the author's trocar because it is rigid, which makes it more dangerous than a flexible drainage-tube.

He recalled one case in which he opened two large abscesses from the vagina, one on either side, about four months after confinement, and still the temperature kept at 103° to 104° . After a week he saw that a cœliotomy was the only chance of saving his patient's life, so this was done, and he then found that in addition to the abscess cavities which had been opened, there were two additional separate abscess cavities in the tubes, and one ovarian abscess, all three of which it would have been impossible to reach through the vagina. He removed both tubes and ovaries, and his patient recovered. There were, of course, other methods of incision, as for instance along Poupart's ligament; he had opened one pelvic abscess by an incision from the hip through the sacro-sciatic foramen into the parametrium, making a counter-opening into the vagina and establishing thorough drainage from the hip to the vagina.

Dr. H. L. COLLYER also indorsed the treatment laid down in the paper. He said that pelvic abscesses occurring after miscarriage and parturition are usually in the cellular tissue, although pyosalpinx may complicate the pelvic abscess. If these abscesses are not opened they tend to rupture into the abdominal cavity, rectum, small intestine, or vagina, but unfortunately only those who have a skilled sense of touch are able to detect these abscesses which may readily simulate abscesses of the tubes. The speaker referred to a case of difficult labor from

contracted pelvis, which was followed by elevation of temperature and evidence of suppuration, yet the uterus was freely movable. He had been advised to perform laparotomy in this case, but he did not consider, under the circumstances, that this was the proper treatment. As there seemed to be a fluctuating point on the side of the vagina, an incision was made at this point, and it entered an abscess cavity situated behind the rectum. The opening was then enlarged and a T-drainage-tube inserted. The abscess cavity extended up to the promontory of the sacrum and did not communicate with the abdominal cavity. The cavity was washed out with a solution of peroxide of hydrogen and the patient recovered in two weeks. In such a case *coeliotomy* would have been useless. If abscesses in the broad ligament are opened through the vagina by a sufficiently large opening, they usually heal up satisfactorily. *Coeliotomy* very often proves fatal in these cases on account of the extent of the adhesions and the liability to fatal hemorrhage.

Dr. H. N. VINEBERG said there was very little in the paper for unfavorable criticism. In most of the cases spoken of, suppuration had already occurred and was advanced, but in private practice one meets frequently with cases at an early stage in which there is exudation behind the uterus, and in which it is difficult to decide just when to interfere. He had not been allowed to interfere in several cases, the abscesses broke through the vagina or rectum, and the patients recovered completely. On this account he had wondered whether he would not have really seriously complicated these cases if he had primarily made an incision through the vagina.

Dr. MALCOLM McLEAN said he only wished to add his word of commendation regarding the treatment described in the paper, especially as to the distinction made between those cases which required *coeliotomy* and those which may be and ought to be attacked through the vagina.

Dr. W. G. WYLIE said that as he listened to the paper he thought it had been rather too much condensed, so that certain points had been somewhat misunderstood. The paper was based not only on the forty cases which were punctured, but on six or seven hundred other cases. Where puncture had been resorted to it was an absolute necessity because the radical operation would have almost certainly proved fatal. Several of the cases had been treated in this way without giving ether or even removing them from the bed. Those who have had a large experience must agree that there is a certain number of cases in which

only puncture can be done with propriety. In the last three years he had probably operated on fifteen or twenty cases. These old abscesses alternately fill and empty themselves, and it is during the period of distention that an expert can tap the abscess and relieve the patient without adding to the danger and probably with the result of saving the patient from further sepsis. Eight or nine years ago he brought up this same subject, and took the position that at least four out of five cases of chronic pelvic abscess were due to salpingitis, yet at that time out of the ten or eleven who spoke not one sustained his position. To-day, the tendency is if one speaks of pelvic abscess to take it for granted that it is a pyosalpinx. Unfortunately the paper did not deal with sufficient fulness with the early stage of these abscesses.

Dr. R. H. WYLIE, in closing the discussion, said that he had seen some cases which had opened into the rectum, and in which as a consequence fistulæ remained until they had been subsequently punctured and freer drainage obtained through the vagina, when the fistulæ in the gut soon healed. After this cœliotomy had been performed and the patients recovered. He had also seen several cases with fistulæ into the gut cured by a primary cœliotomy. Puncture is done only in cases where the symptoms are extremely urgent, and in the vast majority of cases it is followed by a fall of temperature; if not, it is very easy to dilate the opening still further and secure freer drainage. The operation is intended to relieve the immediate menace to life. The inaccessibility to the knife of the posterior fornix of the vagina militates against any dissecting operation which is slower than a puncture. He was a very firm believer in cœliotomy for pelvic abscesses and did it in the majority of cases. Where the abscess is confined to the broad ligament, an operation along Poupert's ligament will secure just as good a result as if a cœliotomy had been performed. He had never seen a case where puncture by the rectum was demanded, and he could hardly imagine a case which could not be more satisfactorily treated by one of the other methods described. According to some, abscesses opening into the rectum are incurable; at any rate they are exposed to the septic influences of the bowel which are much greater than in the vagina, and the healing process is not likely to progress very satisfactorily. He had not entered very fully into the indications for operative procedure, but where there is a rise of temperature, evidence of pus, and a mass can be felt, the sooner the operation is performed the better, not because a cure will always result, but because these patients are almost always made invalids or die from the condition.

Disease of the Appendages, Simulating Fibroid Degeneration of the Uterus. (Final Report.)

Dr. POLK said that about a year ago he had presented to the Society a case of disease of the appendages which had simulated fibroid degeneration of the uterus,—the true condition being a pyosalpinx on one side and an ovarian abscess on the other, with such an amount of organized peritoneal exudation over these structures that they felt like solid growth. Any attempt to remove the appendages was found to be impossible, so that the uterus had been extirpated, leaving the cervix; the uterine arteries had been tied at the time of this first operation, the hemorrhage being controlled in that way.

Dr. POLK now presented the cervix which he had been obliged to remove a few days ago, because downward drainage had been defective, the necessity for drainage growing out of the fact that the sutures around the vessels had become infected from a fistulous opening in the rectum which, though closed at the time of operation, had opened some thirty-six hours after the operation was completed. In order to close the sinus opening on the abdominal surface, (the intestinal fistula still existing), Dr. Polk concluded to remove the portion of cervix which had been left and close the opening in the abdominal wound above. This he had succeeded in doing, the result being that the opening in the intestine had closed. The abdominal sinus had likewise closed, and within the last few days there was every evidence of complete cicatrization of the tract down as far as the vagina. It was interesting to note that this cervix (which is of good size and well nourished, there being fully an inch of it) was removed without the necessity of ligating a single vessel, the ligation of the trunk of the uterine vessel necessitating an anastomosis; but these vessels, although sufficient for purposes of nutrition, required no ligation in the removal.

Complete Versus Partial Extirpation of the Uterus.

Dr. POLK said that in connection with this specimen he desired to make a few remarks in answer to criticisms which had been made on specimens which he had presented at the meeting of December 6th, 1892. In the operation which has been so successfully advocated and performed by Dr. Goffe, after tying the uterine arteries, he brings the flap back over the stump. The speaker said that after tying these arteries, his own plan was simply to dissect the uterus out of its capsule going between the external muscular coat of the lower segment of the uterus and the uterine tissue until entering the vagina, which occurred at the utero-vaginal junction. By operating in this way, he does not

in any way interfere with the support of the vagina or of the pelvic floor, and by turning in this super-abundant tissue, he effectually closes the opening into the vagina. A shorter time is required for this operation than for that advocated by Dr. Goffe. Regarding the statement which had been made that the intestinal obstruction occurring in one of his cases would probably not have occurred if the Goffe operation had been done, he wished to say that there is no more necessity of leaving raw surfaces in the one than in the other. The occurrence of the intestinal obstruction in his case was purely accidental and arose from the fact that while operating on this patient, another one upon whom he had just performed hysterectomy developed alarming symptoms, and in the haste of the moment he had not closed the gaping surface as carefully as he would otherwise have done.

THE ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL
STATE OF NEW YORK. EIGHTH ANNUAL MEETING,
TUESDAY, JANUARY 17TH AND 18TH.

DR. JOHN G. PERRY, PRESIDENT, in the Chair ; First Day.

*"A Case of Extra-Uterine Pregnancy ; Rupture at the Second Month ;
Month ; Abdominal Section Two Weeks Later," etc.*

DR. WALTER L. BURRAGE read a paper on this subject. (See page 377.)

DR. HARRISON. This is a very important and instructive case and one point is particularly important, viz : the question of the removal of the sac. Without intending to make an adverse criticism upon the Doctor's method of treatment,—probably from the conditions encountered it was almost impossible to remove the sac—still I want to impress the fact that the ideal operation should always be the removal of the foetal sac. I remember some years ago Dr. Thomas had a case, and he left the placenta *in situ* and did not attempt to remove it, because he was afraid of hemorrhage. Since then the operation has been performed often, even in advanced gestation, which has reached the seventh or eighth month or full term. I think that is the operation that we should always aim at, whether in the beginning or in the later months of pregnancy. Of course in the later months it is much more difficult, but in the earlier months, especially if you can operate before rupture, it is easy enough ; the conditions are very favorable for the removal of the whole mass. The history of this case shows the great difficulty that you encounter when you leave the foetal sac. You have

a source of empoisonment, as was proven by the clinical history of this case.

Dr. BAKER. The subject is one of deep interest not only to the gynæcologist and abdominal surgeon, but to the general practitioner who is likely first to see cases of this sort. If the general practitioner can reach an earlier diagnosis and the case come quickly in the hands of the operator, so much better the chance for success and so much the better, too, the chance for removing the whole sac. We should impress upon the general practitioner the importance of a careful examination in any case which has gone over a period and where there is any feeling of heaviness or uneasy feeling about the pelvis — particularly if there is any little discharge or irregular flow, coming and going. We know that there is much at stake, and it is far better that many an examination should prove unnecessary rather than that one such case should escape us, perhaps at the risk of the patient's life. I know that this is rather an extreme view to take, yet it is only by such careful examination, if need be under ether, that we can more quickly detect these cases. And if the physician who has charge of such a case should be aware that the patient has been subject previously to some other uterine disease—to endometritis, for instance, or to any disease which favors tubal conception—then the case would demand immediate and careful investigation to be able to exclude the serious conditions which we are now considering from the category of possible conditions present.

Now, the diagnosis being made, we come to the question of treatment, and here there may be some diversity of opinion. In a case giving rise to the symptoms I have spoken of, and if I should find a soft tumor in one or the other of the tubes, say from the size of an English walnut to the size of a hen's egg, I should feel inclined to resort at once to a cœliotomy. I am aware that this view differs somewhat from that I expressed some years ago in regard to the aid of the electrical treatment. I think to-day, with the smaller percentage of danger in such cases by abdominal section, that the quicker, surer and better way would be to resort to the operation at once. It is true that we may be putting the patient to an unnecessary risk, but when we remember the period of uncertainty that is going to hang over the case —perhaps two or three months of great anxiety while we stand prepared with knife in one hand and electrode in the other — I think that any one who has had success in abdominal surgery would be likely to accept the abdominal operation as a radical cure. But in the hands of

the general practitioner, one who has not had the experience and who perhaps has not the skill to operate and yet is unable to turn the case over to the specialist, I think he may accomplish good with galvanism. I do not mean at all to depreciate the value of experience and the importance of carrying out a careful *technique* in the application of the galvanic current but I think that by this means, although not especially an electro-therapeutist, he may save his patient. But of course when the case has gone so far that the symptoms are pronounced, and we have the sharp, lacerating pains, there is but one procedure and that is abdominal section. I agree with Dr. Harrison as to the importance of removal of the entire sac.

DR. GOFFE. I thoroughly agree with Dr. Baker's remarks in reference to the importance of early diagnosis and in favor of early operation when the diagnosis is made; also with Dr. Harrison in regard to the entire removal of the sac whenever it is possible. But the case presented offers other points of interest. When the case reached Dr. Burrage he was dealing with a case of general peritonitis due to absorption. While the history pointed to ectopic gestation it seems to me that no matter whether it was due to ectopic gestation, a ruptured pus-tube or a ruptured abscess of the ovary, the condition would demand the same treatment, and the Doctor has taken the right course in doing the operation at once. These cases are destined to a fatal issue unless they are very promptly relieved, and the proper relief comes from cœliotomy. A number of cases are on record where this has been done and the patient saved not only in ectopic gestation but in other conditions. One point in regard to the technique of the treatment is the use of iodoform-gauze. I have used the gauze handkerchief and I have used the gauze without the handkerchief. The object of the handkerchief is to assist in the removing of the gauze after it has fulfilled its functions. I have found that the gauze inserted without the handkerchief into the pelvic cavity makes a better drain than with it. And, therefore, I have discarded the handkerchief altogether. I have found no difficulty as to the removal of the gauze. The exudate is apt to exude into the meshes of the gauze which has to be removed with considerable care or to be left a sufficient time to permit the exudate to become softened. By inserting the gauze in strips the best results are obtained. In Dr. Burrage's case it would seem that the handkerchief did not accomplish its purpose.

DR. BOLDT. (By invitation). Two very important points are to be taken into consideration in the treatment of ectopic gestation. The first

question is: Can the patient survive the shock of a rupture without an operation, or can she not? There is a large percentage of patients who certainly survive the rupture. Another class of patients are those who develop sepsis within a week or two, and that class of patients are going to require an operation.

I think we all agree with regard to the diagnosis of a rupture of an ectopic gestation. If the patient has skipped one menstrual period and subsequently has proctodynia and an irregular discharge of a peculiar, chocolate-colored blood, grumous and sometimes of a peculiar odor, and if we find on an examination a tumor of an indefinite outline, to one or the other side of the uterus, adherent to the sides and the floor of the pelvis, we may say with a degree of certainty that this patient has had a ruptured ectopic gestation. In that case it will depend on the symptoms which course we pursue. If the patient develops septic symptoms, undoubtedly the proper course to pursue is cœliotomy. We can always remove the sac if such accident has occurred four or five weeks after our observation, provided we have a view of our field of operation. To have a view of the field of operation it is only necessary to lift the pelvis to the fullest extent and allow the intestines to fall back into the abdominal cavity and gravitate towards the diaphragm. There is no doubt if we do this that in every instance we will be able to effect a separation of the sac of gestation. We can relieve the oozing in the way that has been described here—by draining. As to whether it is an iodoform-gauze, a sublimate gauze, or a simple gauze is absolutely immaterial, so long as it is sterilized. But I think my predecessor is mistaken as to the simple strips doing the work. We are going to have less discomfort to the patient and to ourselves in taking the gauze away from the pelvic cavity if we put the large piece in and then subsequently put in strips.

There is another class of patients who, subsequent to a rupture, are going to do very fairly. They may develop one and a half or even two degrees of temperature above the normal, but the pulse will remain good, and they may stay in bed for two or three months; they are ultimately going to recover.

I think the course we are to adopt will depend upon the judgment of the physician, and everyone should use the therapeutic means which are indicated in the particular case.

Dr. J. DUNCAN EMMET. I was very glad to hear Dr. Boldt imply the advisability of waiting for operation until some suggestion of rupture or sepsis has occurred. On moral grounds I do not think it is ever

advisable to operate for extra-uterine pregnancy until there is some evidence that the foetus is dead. We have sufficient evidence now before the profession that in the majority of cases women will recover either with artificial assistance or by themselves when rupture does take place. It is the duty of the physician to watch carefully the course of the extra-uterine pregnancy and on any evidence of rupture, (which of course would suggest the death of the foetus), or on any other indication of the death of the foetus, to immediately operate to save the woman's life. The result has been so fortunate with patients where this course has been followed that I do not think that we are justified in deliberately sacrificing and killing the foetus for the sake of saving a woman's life which may be in danger in the future.

Dr. MCGINNIS. I am familiar with the effect upon the average practitioner or gynæcologist of the word "electricity," and while there is a good deal of cause for this feeling and I join with them in crying down its improper use, yet the question comes up right here whether we are justified in risking the patient's life by resorting to an operation with as many dangers as that of opening the abdomen. I know there are men in the profession who will believe nothing good of electricity—nor do they want to—but I must be guided by my own experience. I have had seven cases in consultation with other men and have treated them with electricity. All of them did well and there were no dangerous symptoms.

In regard to the use of the current, I would like to put my name on record as being heartily opposed to its use after the twelfth week. As to its application, some prefer the Faradic and some the Galvanic method. Either one will accomplish the result. In my first case I used the Faradic current but the patient suffered so much pain that it was a question whether ether should not be used each time. There were five applications made, one each day, ten minutes each sitting. The others were all treated by means of the interrupted galvanic process, perhaps an interruption every two seconds.

The current should not be over fifty-five to sixty milliamperes. The method of procedure is to place the round ball-electrode, with the insulated stem, against the mass in the vagina and with that electrode is connected the positive wire. With one of the patients it was noticed after the third application that the sac was decidedly smaller; after the fourth application this decrease in size was more marked and after the fifth and sixth it was down to about two-thirds its original size. The treatment was stopped, the patient was kept

quiet and she never had any further trouble. Eighteen months after she was pregnant again and since that time has been delivered of a fine child. In this case had the operation been resorted to the chance for future maturity would have been prevented.

Dr. HARRISON was of the opinion that the Doctor was mistaken in his last remark, and that the danger was as great in this respect where electricity was applied as where an operation was performed.

Dr. CLEVELAND. I have always taken a conservative stand in regard to operation for ectopic gestation, for what seemed to me sufficient reasons. There are many cases of post-mortems, made for other purposes, showing the remains of foetal life encysted, which have done the patients no harm during life. We have records of the success of the application of Galvanism in destroying foetal life and in a number of cases the remains of the gestation have disappeared; so led by such testimony, I have favored the use of the Galvanic current in the early months. I think there is no question that at or after the third month, when rupture is imminent, we should seriously consider the question of coeliotomy, and certainly after rupture I would not wait even for sepsis—I would operate.

Dr. MOSELY. In such cases we have these two things: the cessation of menstruation and a very slight enlargement in the tube. Since leaving the Woman's Hospital I have been a moderate advocate of operative gynæcology but at the same time have experienced enough in the electrical line to make me thoroughly believe that there is a certain amount of value in electrical treatment, so long as it does not aggravate certain symptoms. The use of electricity in a proper amount is certainly safe. Take a current of fifty, seventy-five or even a hundred milliampères, and if after one application the case is locally more favorable you have a very positive sign that you have done no injury. After giving several applications, if there is a cessation of the growth or decrease in the size of the tube, you have a positive sign that you have not only done no harm, but good. If in spite of that the increase goes on, you have a positive sign that you have done no good, but you have the case as well in hand as though you had never applied the current. In some cases we simply use that as a possible good, in many cases a probable good, and for the reason that you do not lay your patient open, if properly used, to any increased pain. So, in these cases where you have a cessation of menstruation for one menstrual period, and an increase in the line of the tube, although it is absolutely no positive sign of tubal pregnancy, (because you would have

the same indications with pus or fluid in the tube), at the same time you have a possible or probable sign of tubal pregnancy. And as by the use of electricity you do not injure the patient, I think it is practicable and justifiable to try it and see what the effect of the current will be.

As to the operation, I think we have to some extent lost sight of the value of washing out the pelvic cavity. I do not believe in leaving pus in the pelvic cavity, although you have an opening in the abdominal wall. The position of the patient is on her back. The pus will not drain out thoroughly from the abdominal cavity. In one case I followed the washing out of the abdominal cavity for two months. The use of sterilized water there can do no harm if there is an opportunity for its escape—cannot do the harm that even a minute quantity of pus would. Any thing less than a thorough washing out of the pelvic cavity is not justifiable.

DR. BUCKMASTER. The dangers of ectopic pregnancy have justly excited the greatest interest of the profession. The danger of hemorrhage has been specially emphasized and yet it is a very rare thing for us to see a woman who has died from internal hemorrhage, whether it be from ectopic pregnancy or any other cause. That abnormal conception is commonly met with is undoubtedly proven by pathological research, and the only logical inference is that the greater number of these cases have recovered without treatment. This relieves us from considering the moral question raised by Dr. Duncan Emmet, which, followed to its logical conclusion I believe would lead us to the conviction that the destruction of a living foetus at any period is logically quite as immoral as the destruction of an adult. I cannot see any difference. So this relieves us to some degree from a very embarrassing question which everybody must settle with his own conscience.

Now, to follow out the programme, I would state that before rupture I would do nothing, having made the diagnosis of extra-uterine pregnancy, but watch the case. After rupture, I would do nothing unless the symptoms called for treatment. If I were with a case during rupture I would operate. I do not mean that I would let a case become markedly septic, but I would await, watching the case so closely that an operation could be performed as soon as the indications arose.

DR. MCGINNIS. If I get a case with the slightest symptoms of rupture, I do not give electricity but hasten to operate as quickly as possible. I would not wait for septic trouble to develop.

DR. MOSELEY. I agree with the doctor in what he has just said.

And as to the moral question, when that comes up we have two things to think of. The mother has absolute entity; the foetus is an absolutely uncertain entity. We must save the foetus if we can without destroying the life of the mother. The thing which exists is the thing to protect; the thing which does not exist as a positive entity we are to protect if we can.

Dr. BOLDT. I desire to reiterate the statement that the sac can invariably be removed if you see the field of your operation at an early period. The hips should be raised sixty, seventy-five, or even more degrees.

Dr. J. DUNCAN EMMET. In reference to Dr. Moseley's remarks, I think that scientists agree that the foetus has distinct life *sui generis* from the moment of conception. But if the foetus has human life from the moment of conception it is an entity; its identity is as marked and distinct as the mother's. Therefore, because the one thing is small and the other large, I cannot see how our responsibility with regard to these two lives is altered in the slightest. If we cannot save the mother's life except by sacrificing the child, I do not think we can do a wrong that a right may come of it.

Dr. HARRISON. I think we can get closer to the case by considering it according to the programme—before rupture, during rupture and after rupture. Some time ago I agreed with Dr. McGinnis that in the early stages of ectopic gestation galvanism was the thing. I certainly succeeded in saving the lives of several cases that way. But notwithstanding that I say that it was a great advance when Werth, in his treatise on ectopic gestation, laid down this principle—that every ectopic gestation should be considered as a malignant growth and removed accordingly. If you make the diagnosis in the early stages of pregnancy, do not use galvanism. And why? It is a waste of time! Remove it! As for the moral question, you need not consider that, for the simple reason that the foetus is dead anyhow. If you use electricity you may kill your foetus, and your patient may perish subsequently; she may die from peritonitis or from subsequent hemorrhage, as has been proven. Therefore, in the early stages, as soon as the diagnosis is made, extirpate the whole sac. When rupture has taken place, you should be guided by the symptoms. If they assume a threatening character, perform laparotomy at once. If they are not threatening, you use an expectant treatment; you wait. And the reason of the difference is this: If the tubal pregnancy bursts about the placenta or peritoneal portion of the tube and you have a free

hemorrhage in the abdominal cavity, you should operate, because she will bleed to death if you do not. But if the rupture takes place into the broad ligament, it is walled in by the connective tissue. In this case there is no necessity to operate, because the pressure without the wall will control the hemorrhage. There is another class of cases where you will not have to operate: when the hemorrhage is not in the peritoneal cavity, but when it takes place into a closed space previously shut off by adhesions. Dr. Dudley had an instructive case which illuminated this whole thing. I was called in consultation, and we diagnosed the case as an ectopic gestation—an extra-uterine pregnancy. The patient did not bleed to death and we saw why when we came to operate. We did not operate as once, simply because there were no threatening symptoms. The patient reacted from the collapse into which she was thrown, we waited a little while, and afterwards Dr. Dudley thought it was better to operate and I agreed with him. The woman did not bleed to death because the adhesions walled the effusion in.

Dr. BOLDT. I know Dr. Harrison does not mean that you should operate as soon as the diagnosis has been made under any conditions. When you have an ectopic gestation and a rupture has taken place, and the patient is in a condition of collapse, you would not operate, because the patient would almost positively die. We should never operate immediately on the spur of the moment, but should wait until the most urgent symptoms have subsided.

Dr. MCGINNIS. Dr. Harrison has made use of a quotation to the effect that any ectopic gestation is a malignant growth. Would he call the scar tissue in a lacerated cervix malignant because it might become so eventually? I hardly think so, and it seems to me that the term "malignant" is as much a misnomer in one case as in the other.

Dr. HARRISON. I only quoted from Werth, and I think that his idea is the correct one—that it should be treated as a malignant growth.

Dr. PORTER. I had two cases that I thought I might use the galvanic current on, and they both turned out well. So I have nothing to lead me to fear that electricity is not capable of doing good in those cases. But regarding what Dr. Moseley has said, it seems to me that after it gets to a stage where we can recognize it, unless we are sure of a speedy and good result from the electricity, we run great risks in waiting to see whether the electricity is going to do any good. Now, in very few of these cases are we called in before the rupture occurs.

I have never known, personally, of a case that died from the immediate effect of a primary hemorrhage, although I know they are recorded. So it is better to wait until the primary shock is over. The question is—shall we wait? I have seen at least ten cases of extra-uterine pregnancy, and there has been more danger from the repeated hemorrhages than from the sepsis, and if we are going to wait, these repeated hemorrhages will produce such a weakened condition that few of us would operate. I know that many cases recover without any operative interference. I had one where the patient refused to be operated upon and recovered, and she has been throwing it up at me ever since. But I certainly think we should save more lives by operating on every case as soon as they recovered from the primary shock than by waiting until sepsis develops.

Dr. MOSELEY. I based my remarks on this: that in those cases where there is simply an enlargement in the tube and an absence of one menstrual period, your diagnosis is an absolute uncertainty, and in such a case it is perfectly justifiable in any one to try galvanism. And in addition I would say this: That in cases of extra-uterine gestation, especially of the tubal variety, the life of the foetus is such an uncertain factor that it is almost certain to be sacrificed; and if we do not, in a case of tubal pregnancy, destroy the foetus before rupture takes place, we must, in the vast majority of cases, remove it after rupture and I believe with greater danger to the patient.

Dr. EDEBOHLS. (By invitation). I would like to speak for the strangers here. I think it is always well, if possible, to remove the sac, but where you have suppuration I think there is great advantage to be gained by a counter-opening of the channel. Persist in washing out the abdominal cavity in the hopes of cleaning it entirely.

Dr. WYLIE. I have always stated that I have not reached that stage of perfection in examination where I am very positive about extra-uterine pregnancy, except in rare cases. I have been able to make a diagnosis occasionally. In the last two months I had five cases diagnosed as extra-uterine pregnancy—some of them sworn to by several men. I operated on three, and one was extra-uterine pregnancy and two were not. I cannot positively recognize the conditions in all cases, though some other men may be able to. But if a woman has a tumor in her, large enough to require operation, that is, larger than a simple cyst and ovarian tumor, or a large corpus uteri, or if it is beyond a certain size, I say the gynæcologist of to-day should without hesitation prepare the patient, make a diagnosis and then

deal with the tumor by operation. My experience with electricity is very small, but I have had the good fortune to operate on quite a large number of cases where electricity had been used, and where strong currents had been used.

The use of strong currents of electricity is certainly in many cases three or four times as dangerous as the operation for extra-uterine pregnancy in the hands of an expert, unless the patient is in a dangerous position from hemorrhage or sepsis. I contend that when you can make the diagnosis it is simply nonsense to talk about fooling with electricity. The only thing to do is to operate.

Dr. DUDLEY. My opinion is that the question of electricity has been relegated to the past, and it is simply a question of diagnosis. If you can make your diagnosis of extra-uterine pregnancy, treat it by surgical means. If your patient will not submit to an operation I have no doubt that a man, if he is an expert in electricity, may perhaps do something, but he may hasten the danger. The cases that have been reported as cured in the past by electricity are cases where the life of the foetus has been taken, and in the majority of cases if we could trace them afterwards we would find that the patients have been injured and have come to the abdominal section later on or have remained in a state of invalidism for years. From my experience it is impossible to make a correct diagnosis of extra-uterine pregnancy in the early stages in every case, for the reason that we have so many other conditions which will mask the symptoms of extra-uterine pregnancy. If the diagnosis is made, I advise operation in the first stages, laying before the patient the different methods of treatment and giving her the benefit of my experience.

The symptoms of extra-uterine pregnancy—the cessation of menstruation for a time, the reflex symptoms of the stomach, the acute pain in the side, the rapid enlargement located at one or the other side, possibly behind the uterus but never in front of it, the intense pain that accompanies any pressure upon it, the appearance of hemorrhage from the uterus and the discharge of decidua—are proofs sufficient of an extra-uterine pregnancy to enable me to say positively that the patient is in danger from such a complication. In the first stages, if we can make the diagnosis, operation should be advised. In the stage of rupture, it will depend upon the time when you see the patient as to whether you shall operate immediately or not; the patient may be in profound shock. At that time stimulants would be the proper method of treatment to apply. As soon as the patient has rallied from

the immediate shock I believe it is your duty to operate, before the danger of peritonitis has taken place, because peritonitis will follow, and a second hemorrhage will result, and you will lose your patient. In three of my cases where I operated after rupture had taken place, I found the foetus in the abdominal cavity among the intestines. Many cases have been reported where tubal pregnancy was believed to have existed; abdominal section was made; the placenta was found, or portions of it, and a small sac but no foetus, and it was believed that the foetus had been absorbed. My experience has taught me that in that case the foetus occupies some other position in the abdominal cavity, and in two of the cases I found the foetus way up on the diaphragm. Under such circumstances, operating after rupture, you have a complication; you have not only the adhesions of the after-birth to take care of, but you have the clotted blood to deal with and intestinal adhesions, and it becomes a question of good judgment how you should treat it—whether you should break up all adhesions and remove the placenta at the time, or do as the Doctor did, stitch the sac into the womb and allow it to remain, whether you should use drainage or not. In the three cases I have alluded to, where rupture had taken place weeks before, the patients had rallied from the shock. They were not having the elevation of temperature, the rapid pulse, the symptoms of occasional shock as a hemorrhage would take place. When I opened the abdomen, I found I had not only the placenta to deal with but intestinal adhesions too. I secured the foetus in each case, broke up the adhesions and removed the placenta, washing the patient out, as I invariably do, with hot water, in fact, water from 110 to 112; I kept a constant current of hot water going on to the side of the placenta until it was covered with the coagulation that is due to heat under such circumstances. Then I closed the patients up, and they got well. In two of the cases of the five that I operated on, the work was done before rupture had taken place. I pushed the trocar into the sac and drained it from below, and those two patients got well. As to electricity, I believe there is some danger of producing a rupture of the sac by electricity, and I think we have had cases where rupture has been caused by it.

Dr. JOHN ASPELL, on behalf of Dr. Coe, exhibited a specimen of double ectopic pregnancy, recently removed from a patient.

Etiology and Pathology of Pelvic Adhesions.

Dr. H. C. COE read a paper on this subject. (See page 385.)

The Surgical Treatment of Pelvic Adhesions.

Dr. CLEMENT CLEVELAND read a paper on this subject. (See page 391.)

Dr. BISSELL (By invitation) then exhibited the instrument which he had invented.

DISCUSSION.

Dr. WYLIE said: I regret to take the position that I have so often occupied before gynæcologists of this city—that of an objector. But when I read that we were to discuss here the question of adhesions I thought it was a mistake—for this reason: We can imagine that many years ago medical men would get up and discuss the scientific meaning of coughing, and I think that it will look rather strange, twenty years from now, that we got up in scientific meetings and discussed adhesions this way. I do not claim that these gentlemen have intentionally called adhesions disease, an entity in itself, or a thing to be treated in that sense, but that has been the tendency for many years, and I have preached against it. An adhesion is simply nature's method of healing a lesion, or protecting the general system from local poison, or to keep a foreign body from irritating. To talk of the diagnosis of adhesions is simply to talk of the diagnosis of different diseases. The adhesion will depend in its nature almost entirely on the disease. The only excuse we can have for discussing it as something distinctly to be treated would be when it interferes with the function of an organ, or obstructs the function, such as obstructing the intestines. If you cure your diseased organ, your adhesion will disappear; its function will go; its life will go, and it will disappear and be absorbed. I have frequently said that if I had some power to-day to take every woman suffering with so-called pelvic adhesions and dissolve them to suit myself, I would not do it, because I know that nature would not have them there if they were not needed. Adhesions are really a help to us, rather than a hindrance. I believe that the present method of breaking adhesions up without knowing what the disease is will be abandoned as wrong. When we understand the nature of the different diseases, adhesions will be very simple.

Dr. EMMET. I think Dr. Wylie errs at the other extreme quite as much as do those who hold the position which he now attacks. While a great many adhesions are undoubtedly thrown out by nature as a protection to certain parts, there are certain classes of adhesions which are due to juxtaposition of membranes, not to the desire

of nature but simply to mechanical causes. If two folds of the peritoneum come together and touch, an adhesion will take place whether there is anything to protect or not. Dr. Wylie has left out that part of the subject in his definition. Many of the adhesions, the symptoms of which we are called upon to treat, are of this latter class. Some of these adhesions remain after the condition which they were thrown out to protect has disappeared, and they then become a source of irritation and should be removed.

Dr. L. G. BALDWIN. Dr. Dudley did not speak of one position of the uterus, and that is the lateral-version, where it is drawn up to one side, which very often interferes with the bladder. I have seen cases where the bladder becomes distended, while the patient will go for quite a while without passing any urine. The diagnosis can be made very readily by putting your patient on the back, when you feel the resistance on one side. You will find the vagina is drawn up to one side. Sometimes you can break up these adhesions and get the uterus into the natural position, and they get over this trouble with the bladder. In some cases I have made an opening in the bladder and drained that completely, and when that cause is eliminated and the urine taken away, the uterus will gradually come down to its position. It is one of those cases which can be relieved by the treatment of leaving the bladder open.

Dr. DUDLEY. As one of the original speakers, I would like to correct what seems to be a wrong impression. In this discussion we did not, as I understand it, speak of adhesions as a distinct disease. When we were discussing the subject of pelvic adhesions, their etiology, pathology, diagnosis and surgical treatment. The first part of the subject was handled by the gentleman who opened the discussion. So far as my experience goes, we only look upon adhesions as a symptom in the early stages. But as we have symptoms of disease that finally lead into true disease in the other portions of the body, so we have adhesions in the pelvis which originally act only as symptoms and finally become the disease themselves. And when we come to intestinal adhesions, we have a disease resulting from that alone—the adhesion becomes the major factor in the case. When we have an imprisonment of a diseased ovary, we have not only the diseased ovary. When the adhesion becomes the principal source of trouble, it should be regarded as the disease and so treated. I myself look upon adhesions in the early stage as only a symptom.

SECOND DAY.

The President called the meeting to order and presided.

Reminiscences of the Founders of the Woman's Hospital Association.

Dr. THOMAS ADDIS EMMET read a paper on this subject. (See page 353.)

After the reading of the paper, on motion of Dr. Harrison, seconded by Dr. Dudley, a vote of thanks was extended on behalf of the Association to Dr. Emmet.

The diagnosis of Pelvic Adhesions.

Dr. A. PALMER DUDLEY read a paper on this subject. (See page 380.)

ABSTRACT OF THE EDINBURGH OBSTETRICAL SOCIETY.

Wednesday, January 11th, 1893.

I. Dr. Haig Ferguson showed several phosphatic calculi passed per urethram by a woman presenting the following history. One year before both ovaries and tubes were removed by abdominal section. Several months after a pelvic abscess developed, which ruptured into the rectum. The opening soon closed. The abscess cavity again collected and was punctured per vaginam, after which great vesical irritation developed with pus in urine. Several small calculi were passed. Dr. Ferguson dilated the urethra and extracted the largest of the calculi shown, the nucleus of which was found to be one of the silk pedicle ligatures.

II. Dr. J. W. Ballantyne showed: (1) A placenta with three cysts on its foetal surface, situated close to the insertion of the cord. The two larger cysts were each the size of a greengage, the smaller one-fifth their size. They contained a slightly opalescent pale yellow fluid, and a very fine blood-vessel could be seen on the surface of each of the larger ones. Labor had been normal excepting that when the placenta came away the membranes were torn from the after-birth.

(2). An abortion sac which had been sent to him as a probable example of retarded development of the embryo. The age of gestation

was about three months. The membranes were not intact when abortion was expelled, but every piece of blood-clot was carefully examined and no foetus found. The abortion was the size of a hen's egg. The amniotic cavity was not large enough to contain a foetus of the size usually attained at three months. Inside the amniotic cavity was seen the umbilical cord, four cms. in length; at its end was a grayish structure, somewhat curved about four mms. in length. This was thought to be by Dr. Williams, to whom he was indebted for the specimen, the embryo retarded in development. Dr. Ballantyne regarded it as the torn end of the cord, the embryo having passed away with the liquor amnii. The mother, who was neither syphilitic nor tubercular, had had alternately full-term labors and abortions. All full term infants were females; the aborted foetuses, males.

(3) A foetus with the eruption of measles. The mother, at the end of her fifth month of pregnancy, contracted the disease and when the eruption was beginning to fade, gave birth to this foetus. Several spots were to be seen on its face, back and legs. It was alive when born.

(4). A foetus with general dropsy. Premature labor had been induced on account of distress caused by the excessive distension of the maternal abdomen. Three and a half quarts of liquor amnii escaped when the membranes were ruptured. The infant weighed six pounds, had a distended abdomen and an anasarcaous integument. The placenta was also oedematous.

Dr. J. W. Ballantyne asked Dr. Gulland whether his researches on the placenta had thrown any light upon the problem of the transmission of certain diseases from mother to child.

Dr. Gulland replied that the experiments had not led to any definite results.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

January 25th, 1893.

Dr. Lindsay showed a child with malformation of his genital organs. There were in the same family two other similar cases. These were brought up as girls. He thought that they were hypospadiac males with undescended testicles.

The President, Dr. Pollok, read a paper on the 'prophylaxis and treatment of abortion. He said that it was a popular belief that early abortions needed but little attention. He wished to emphasize the very opposite, viz.: The earlier the abortion the longer should be the rest and greater the care. In the treatment of such cases he dwelt upon the necessity of emptying the uterus. He advised first, rest and sedatives; if they failed, he plugged; after twenty-four hours the ovum usually came away on removing the plug, if not he plugged again. When there was retention of a part he curetted, douched, mopped the cavity with perchloride of iron and inserted a strip of iodoform-gauze, plugging the vagina with the same. This was removed in twenty-four hours and a hot douche given morning and evening.

ROYAL MEDICAL SOCIETY.

January 20th, 1893.

Dr. Lawson Dick read two communications, the first being a case of "Tuberculosis of the Female Genital Organs." He was of the opinion that the mode of infection was most probably by the blood stream, the bacilli being carried from a tubercular focus in the lung or elsewhere, and finding a nidus in the fallopian tubes. He thought that operative interference was of little use in such cases. The second case was one of "Intestinal Obstruction following Laparotomy." All went well for ten days, when sudden vomiting with abdominal pain and distention came on. On the thirteenth day patient suddenly collapsed. A tight stricture was discovered at the post-mortem, two feet above the ileo-cæcal valve. The intestines were contracted below and much distended above stricture. The question whether the stricture, which seemed to be spasmodic, because of its ready yielding to a stream of water passed along the intestines, could be the cause of death.

Dr. Berry said that he did not see how mere spasm could cause death, and that no spasm of the gut could remain for twenty-four hours after death. He thought the stricture was caused by chronic peritonitis, of which patches were found, and that the stream of water forced through had undone the adhesions.

J. D. BISSELL, M. D.

SECTION ANNOUNCEMENT OF THE FIRST PAN-AMERICAN MEDICAL CONGRESS.

To be held at Washington, D. C., September 5th, 6th, 7th and 8th, A. D. 1893.

President: William Pepper, M. D., LL. D., 1811 Spruce Street, Philadelphia, Pa.

SECTION ON OBSTETRICS.

Executive President: Dr. Giles S. Mitchell, 277 West Eighth Street, Cincinnati, O.

Secretaries: Dr. Hugh Hamilton (English-Speaking), Harrisburgh, Penn.; Dr. John J. Castellanos (Spanish-Speaking), New Orleans, La.; Dr. J. B. Fernandez [San Martin 678] Buenos Aires, Argentine Republic; Dr. Claudio Aliaga, La Paz, Bolivia; Dr. Erico Coelho, Rio de Janeiro, U. S. of Brazil; Dr. J. C. Cameron, Montreal, Canada; Dr. Rafael Weiss [Industria 115] Havana, Cuba; Dr. Joaquin Maldonado [Calle 13, No. 64] Bogota, Rep. of Colombia; Dr. Tomas M. Calneck, Cartago, Costa Rica; Dr. Mariano Fernandez Padilla, Guatemala City, Guatemala; Dr. Sérémie, Port au Prince, Haiti; Dr. C. P. Andrews, Honolulu, Hawaii; Dr. Andres Lopez Martinez, Tegucigalpa, Honduras; Dr. Fernando Zórraga [Arco de San Agustín 12] City of Mexico, Mexico; Dr. Velasquez, Managua, Nicaragua; Dr. Isabelino Bosch [18 de Julio 299] Montevideo, Uruguay; Dr. Angel Rivas Baldwin, Caracas, Venezuela.

It is desirable that those who wish to read papers to the section should name the titles before the Fourth of July, 1893, to the Secretaries mentioned below according to the language.

All members of the Profession of Medicine interested are earnestly and cordially invited to be present at the meeting of the Section on Obstetrics at the corner of F and Fourteenth Streets, N. W., in Washington.

Any information will be cheerfully given by mail or otherwise through the below-mentioned Secretaries.

By order of the Executive President.

Secretaries: Dr. Hugh Hamilton, (English-Speaking), 212 and 214 South Second Street, Harrisburg, Penn.; Dr. John J. Catellanos, (Spanish-Speaking), 70 and 72 Orleans Street, New Orleans, La.

PROGRAMME OF THE AMERICAN GYNÆCOLOGICAL SOCIETY.

To be held in the College of Physicians, cor. of 13th and Locust
Streets, Philadelphia.

FIRST DAY.

Tuesday, May 16th. Morning session at 9.30 o'clock. Roll-call,
reception of guests, etc. Address of Welcome, by the President.

Papers: 1. "Abdominal Fistula after Cœliotomy; Its Prevention
and Treatment," by Dr. Paul F. Mundé, of New York. 2. "A New
Operation for Uterine Fibroids, with Report of Cases," by Dr. Franklin
Martin, of Chicago. 3. "A Further Report upon Supra-vaginal
Hysterectomy by the New Method," by Dr. B. F. Baer, of Philadelphia.
4. "Two cases of Supra-vaginal Hysterectomy by Baer's Method," by
Archibald McLaren, of St. Paul. 5. "Congenital Dilatation of the
Vagina," by Dr. William H. Baker, of Boston. Adjournment at 1 P.M.

Afternoon session at three o'clock. 6. "Operations upon the
uterine Appendages with a View to preserving the Functions of Men-
struation and Ovulation," by Dr. William H. Polk, of New York. 7.
"The Treatment of Septicæmia with Oxygen," by Dr. Andrew F.
Carter, of New York. 8. "Puerperal Eclampsia; the Experience of
the Boston Lying-in Hospital during the last Seven Years," by Dr.
Charles M. Green, of Boston. 9. "A Case of Inversion of the Uterus,"
by Dr. Edward P. Davis, of Philadelphia. 10. "Ovarian Tumors
obstructing Pregnancy," by Dr. A. F. A. King, of Washington.
The President's address will be delivered at 8 P.M.

SECOND DAY.

Wednesday May 17th. Morning session at 9.30 o'clock.

11. "Membranous Dysmenorrhœa," by Dr. Thaddeus A. Reamy, of
Philadelphia. 12. "The Operative Treatment of Uterine Fibro-
myomata," by Dr. Hermann J. Boldt, of New York. 13. "The
Causes and Complications of Uterine Fibroids," by Dr. S. C. Gordon,
Portland, Maine. 14. "Internal Crossing of the Ovum," by Dr.
Henry C. Coe, of New York. 15. "Hystero-epilepsy; Report of Seven
Cases cured by Cœliotomy," by Dr. H. Marion Sims, of New York.
16. "Technique of Primary Cœliotomy in Advanced Ectopic Gestation,"
by Dr. W. T. Lusk, of New York. Adjournment at 1 P.M.

Afternoon session at three o'clock. 16. "The Operative Treatment of Prolapsus Uteri et Vaginæ," by Dr. George M. Edebohls, of New York. 17. "The Origin of Dermoid Tumors of the Ovary," by Dr. Arthur W. Johnstone, of Cincinnati. 18. "The Pathology and Treatment of Injuries of the Pelvic Floor," by Dr. Alexander J. C. Skene, of Brooklyn. 19. "The Elastic Ligature *versus* the Wire Serre-nœud in Supra-vaginal Hysterectomy," by Dr. R. Stansbury Sutton, of Pittsburg. 20. "The Surgical Treatment of Abortion," by Dr. Egbert H. Grandin, of New York. 20a. "Surgical Treatment of Uterine Fibroids," by Dr. M. D. Mann, of Buffalo.

Business meeting, with closed doors, at 5 P.M.

A dinner will be given in the evening by the Philadelphia Fellows.

THIRD DAY.

Thursday, May 18th. Morning session at 9.30 o'clock.

20b. "Treatment of Chronic Oöphoritis," by Dr. C. P. Noble, of Philadelphia. 21. "Clinical Report of Cases of Pyosalpinx Treated by Uterine Drainage, with Subsequent Conception," by Dr. Robert A. Murray, of New York. 22. "Vaginal Enterocoele in Pregnancy and Labor," by Dr. Barton C. Hirst, of Philadelphia. 23. "Calcified Tumors of the Ovary," by Dr. J. Whitridge Williams, of Baltimore. 24. "The Results of Aseptic Cœliotomy," by Dr. William H. Wathen, of Louisville. 25. "The Uterine Curette," by Dr. William H. Parish, of Philadelphia.

Adjournment at one P. M.

Afternoon session at three o'clock.

25a. "Intra-pelvic Treatment of the Stump after Supra-Vaginal Amputation of Fibroid Uterus," by Dr. J. R. Goff, of New York. 26. "Retention of Menstrual Fluid in Cases of Bicornate Uterus," by Dr. Charles J. Cullingworth, of London, Eng. 27. "Some Elements of Success in Cœliotomy," by Dr. A. Laphorn Smith, of Montreal, Can. 28. "Practical Methods in Dress Reform," by Dr. Robert L. Dickinson, of Brooklyn. 29. "In Memoriam—Dr. A. Reeves Jackson," by Dr. Henry T. Byford, of Chicago. 30. "In Memoriam—Dr. Charles P. Strong," by Dr. Egbert H. Grandin, of New York. "Is it Proper to Call the Enucleation of Myomata and the Resection of Ovaries Surgical Foolery?" by Dr. A. Martin, of Berlin.

A luncheon will be given each day, after the morning session, to the Fellows and invited guests, at the University Club.

Items of Interest.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND
GYNÆCOLOGISTS.

Will hold its sixth annual meeting at the Russell House, Detroit, Mich., on Thursday, Friday and Saturday, June, 1, 2 and 3, 1893, under the presidency of Dr. Lewis S. McMurtry, of Louisville. The following is the preliminary programme as far as titles are announced:

1. The President's Address, "The Present Position of Pelvic Surgery," by Dr. L. S. McMurtry, Louisville.
2. "Abdominal Fixation," by Dr. Florian Krug, New York.
3. "Endoscopic Tubes for Direct Examination of the Interior of the Uterus and Bladder," by Dr. Robert T. Morris, New York.
4. "Placenta Previa," by Dr. William H. Wenning, Cincinnati.
5. "What are the Indications for Abdominal Section in Intra-Pelvic Hemorrhage?" by Dr. M. Rosenwasser, Cleveland.
6. "Treatment of Metritis," by Dr. E. Pietranera, Cordova, A. R.
7. "A Plea for Better Surgery in the Closure of the Abdominal Incision," by Dr. H. W. Longyear, Detroit.
8. "Remarks on the Treatment after Abdominal Sections," by Dr. C. C. Frederick, Buffalo.
9. "The Management of the Abdominal Incision," by Dr. Charles A. L. Reed, Cincinnati.
10. "Dilatation of the Cervix for Dysmenorrhœa," by Dr. E. M. Pond, Rutland.
11. "Intra-Uterine Pregnancy; with Report of Cases," by Dr. George S. Peck, Youngstown.
12. "A Contribution to the Study of Ectopic Gestation," by Dr. E. Arnold Praeger, Nanaimo.
13. "A Few Practical Notes on the Establishment of Anastomosis between the Gall-Bladder and Intestine for Obstruction of the Common Duct with the Relation of a Case of Obstruction of the Common Duct by Small Growth," by Dr. James F. W. Ross, Toronto.
14. "Vaginal Hysterectomy for Malignant Disease," by Dr. Rufus B. Hall, Cincinnati.
15. "The Care of Pregnant Women," by Dr. John Milton Duff, Pittsburg.
16. "A Contribution to the Pathology of Surgical Disease of the Gall-Bladder," by Dr. Walter P. Manton, Detroit.
17. "The Legal Questions in Gynæcological Operations on the Insane," by Dr. Walter P. Manton, Detroit.
18. "Pelvic Abscess," by Dr. I. S. Stone, Washington.
19. "Central Rupture of the Perineum; Its Causation and Prevention," by Dr. John C. Sexton, Rushville.
20. "A Case of Myomectomy with Extra-Peritoneal Treatment of the Pedicle, followed by Pregnancy and Complicated by Hemorrhages through the Abdominal Cicatrix," by Dr. X. O. Werder, Pittsburg.
21. "Anatomy and Surgical Importance of the Peri-Renal Cellulo-Adipose Tissue," by Dr. L. H. Dunning, Indianapolis.
22. "Report of Cases from Practice with Remarks on the Same," by Dr. A. Vander Veer, Albany.
23. "Further Observation on the Relation of Pelvic Disease and Psychological Disturbances in Women," by Dr. George H. Rohé, Catonsville.

A cordial invitation is extended to the members of the medical profession interested in the work of the Association to attend its several sessions.

By order of the Executive Council,

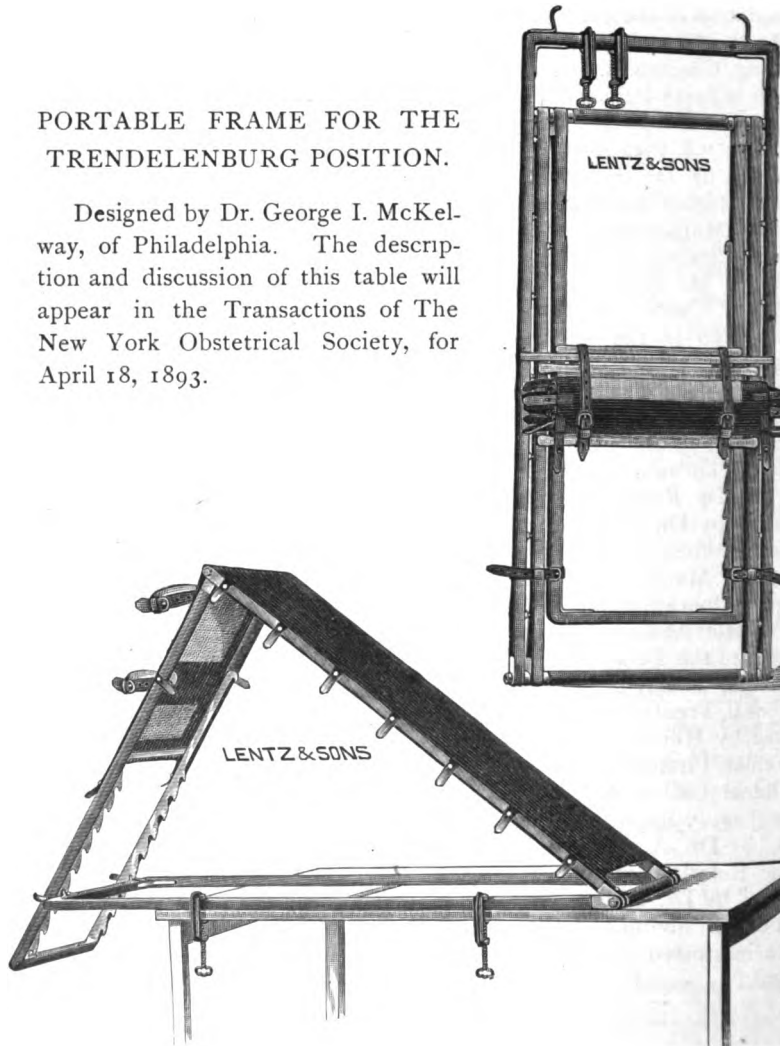
WILLIAM WARREN POTTER, Secretary.

NEW INSTRUMENTS.

We will publish the cut of any new instrument or surgical device of interest to gynaecologists or obstetricians, giving the instrument-maker credit for producing the instrument on the following conditions: He must never part with the model from which the cut is made. This instrument-maker must follow a successful invention. The second condition requires that the reproduction must have the endorsement of the inventor, or in case of a foreign instrument the authorization of one who indorsement will guarantee its being of proper construction.

PORTABLE FRAME FOR THE
TRENDLENBURG POSITION.

Designed by Dr. George I. McKelway, of Philadelphia. The description and discussion of this table will appear in the Transactions of The New York Obstetrical Society, for April 18, 1893.



THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

JUNE, 1893.

THE CLINICAL LIMITATIONS OF SYMPHYSEOTOMY.¹

BY CHAS. JEWETT, A. M., M. D.

Opening the pubic symphysis for delivery in narrow pelvis is an operation more than a hundred years old. But its earlier results under the imperfect technique of that period are of no value for the purposes of this discussion. From the time of its revival by Morisani in 1866 its work has compared favorably with that of Cæsarean section. It is only within a period of about seven years, however, that pubic section has been done under modern surgical methods. According to Dr. Harris, who for several years has upheld the cause of symphyseotomy, sixty-eight operations have been performed since 1886. Of this number nine only have been done in America, and all within little more than four months. Experience, therefore, in symphyseotomy, particularly in our own country, is yet too small to fully determine the place which it will finally hold in obstetric surgery. Yet the material afforded by the recent record to which I have alluded is sufficient to fairly indicate the scope and value of this method of delivery. Of the sixty-eight mothers, sixty-five were saved with no death due to the operation. In one of the fatal cases the death resulted from sepsis contracted before resort to the knife. In another it was due to fatty heart and a chronic nephritis. In the third the patient died within a few hours after

¹Read before the Medical Society of the State of New York, February 7, 1893.

operation, probably from internal hemorrhage, the result of previous interference at other hands than those of the symphyseotomist.

With the exception of vesical or urethral injuries in four cases — and these are preventable — no permanent disability of any kind has been reported as the result of operation. The women have all recovered within an average length of time no greater than the usual period of convalescence after Cæsarean section. In every case firm union of the joint has taken place and the patient has been out of bed within a period varying from seven to thirty days or little more after operation. In this almost unbroken series of successes are included cases of kyphotic deformity, general contraction, osteomalacia and a large proportion of flattened pelves. All grades of contraction were encountered between two and a half and about three and a half inches in the conjugate. In two cases the conjugata vera measured two and a half inches. In one of these the biparietal diameter was three and five-eighths inches, in the other three and eleven sixteenths. The first patient was up on the twelfth day, the other on the fifteenth. In four cases the conjugate was two and five eighths inches. These women all recovered by the end of a month. The conclusion may be fairly drawn from this experience that, with an average head, symphyseotomy in at least a certain proportion of cases is applicable in flattened pelves in which the conjugate is reduced to two and a half inches and in equivalent disproportion of other forms, and that too without the aid of premature labor. This limit has even been exceeded without permanent injury to the structures of the sacro-iliac joint. The mobility of the pelvic joints at term is not a constant quantity, and that two and a half inches is a practicable limit in all cases, even in which the sacro-iliac articulations have not been injured by disease, cannot yet be affirmed. In contractions between two and a half and two and three quarters inches, if discovered in time, the induction of labor at the eighth month followed by symphyseotomy would unquestionably be the safer course.

The choice of procedure, however, in contractions near the minimum limit of symphyseotomy presupposes the ability to accurately estimate the relative size of head and pelvis, and this may tax the skill of the obstetrician more than the most difficult incisive method of delivery.

At its maximum limit the field of pubic section begins where that of forceps and version ends. Future experience, I am disposed to believe, may extend it still farther. A properly conducted symphyseotomy requiring only a minimum of pubic separation is a simpler and safer procedure than difficult high-forceps delivery. The forceps is

responsible for no small proportion of maternal and foetal deaths, and for serious injuries to both mothers and children who survive. Many a mental and physical cripple owes his infirmity to cerebral damage inflicted in a long and difficult forceps extraction. The fear has been expressed that symphyseotomy may be abused by being needlessly done in cases where a living child might have been extracted by simpler means. The reverse of this I venture to assert is the greater danger.

In the line of these remarks is a suggestion of Prof. Michael of Baltimore. In connection with the report of his case in the February number of the *American Journal of Obstetrics* he proposes symphyseotomy for delivery in impacted mento-posterior face cases and in persistent posterior positions of the occiput with impaction. Opening the pubic joint in such cases, after ordinary measures have failed, will I believe be justifiable as a means of saving many foetal lives with practically no increased risk to the mother. It at once converts an extremely difficult or impossible into an easy delivery with a minimum of pubic separation and of consequent violence to the pelvic structures.

It has been erroneously assumed that symphyseotomy is more particularly adapted to transverse contraction and not so well suited to other pelvic deformities. It matters little, I think, what diameter is at fault. The gain which makes delivery possible is not so much the increment in any one diameter as the general increase in the pelvic capacity. The clinical record upholds this opinion. By far the largest number of operations in any one kind of deformity have been done in flattened pelves.

Symphyseotomy is obviously not adapted to cases in which there is ankylosis of the sacro-iliac joints. It is not indicated, therefore, in the Nægele or the Robert pelvis, nor in deformity from hip-joint disease. Here Cæsarean section, or embryotomy on the dead or non-viable foetus, must still hold the field. With these exceptions Cæsarean section in narrow pelvis must in the future be restricted almost wholly to absolute contraction, and craniotomy will be practically abolished.

Over the Cæsarean operation pubic section has obvious advantages. It is better suited to the needs of the general practitioner unused to abdominal surgery. It must not be supposed that it can be undertaken as lightly as a forceps delivery or a version, but it does not demand the same degree of operative skill nor of minute attention to technical detail as does the Cæsarean section.

Within its field it is a better operation than the Cæsarean for the cœliotomist. The same skill which enables him to save ninety-four per

cent. of cases by *coelio-hysterotomy* should save them all by *pudendal* section and in better physical condition. It inflicts much less trauma and no shock. It is done in less time, the incisions requiring little more than the fraction of a minute. A good light is not essential as the operator is guided almost wholly by the sense of touch. Finally it holds out a fair promise of success in that class of neglected labor in narrow pelvis, as yet far too common, in which the results of *Cæsarean* section have been so bad. After exhaustion in prolonged and ineffectual attempts at delivery by other means, *coelio-hysterotomy* has been almost invariably fatal while women have been saved by *symphyseotomy* after four and even six days in labor.

A word in regard to the technique, since that subject has been introduced by Dr. Kelly. Pinard, who has done eight, *symphyseotomies* cuts from above downward and from before backward, precisely as Dr. Kelly recommends from the anatomical standpoint. Charpentier suggests that a lead plate be placed behind the symphysis for protection of the retropubic structures during the division of the joint. The Galbiati knife which has been so much used in this operation I think be improved upon, at least for American practice. The sickle-shaped curve is too large. Either the point will overreach the symphysis and do unintended damage to the pre-pubic structures or the convex margin of the blade will displace too much the structures behind the joint. Dr. Harris in a recent paper has described a modification of the Galbiati knife and has promised soon to present a still further improvement.

In my own case the articulation was easily divided with a common probe-pointed bistoury. After the usual incision through the overlying soft parts, an opening was made between the recti close to the symphysis by a vertical mesial incision. Through this opening the probe-pointed bistoury was passed, its point kept firmly pressed against the posterior surface of the joint, and carried down below the inferior pubic ligament, the left index finger in the vagina serving as a guide. The joint structures were then cut through, mainly from behind forward till the bones were felt to give way. The use of the ordinary probe pointed bistoury was possible in my case because the pelvic brim was ample — the outlet only being contracted — and the abdomen did not overhang the joint. With a narrow brim and a pendulous abdomen an instrument of greater curvature or a different method of incision would be required.

¹Later nineteen.

THE PRESENT STATUS OF EMMET'S OPERATION FOR
LACERATION OF THE CERVIX UTERI.¹

BY HENRY C. COE, M. D.

It is always interesting to compare our earliest crude impressions of medical facts with those of more matured experience. During the ten years which have elapsed since I left the Woman's Hospital there have been many and radical changes in our views regarding many questions in gynæcology which we once thought were "as fixed as the everlasting hills." Many new operations have arisen, flourished and fallen into disrepute. Theories of pelvic pathology, long accepted without question, have been either entirely rejected, or essentially modified, in the light of fresh discoveries at the operating-table and in the dead-house. Methods of treatment, palliative and radical, with much-vaunted claims to immortality have had their day and are mentioned in recent text-books rather as curiosities than as practical procedures. Yet amid all these changes the operation described by Dr. Emmet still remains like its honored originator, hale and hearty. It has always seemed inexplicable to Woman's Hospital graduates, who see so much plastic work, that the cervix operation has obtained such scanty recognition abroad. Pozzi (who is rightly regarded as the fairest of recent foreign writers) thus states his position in the new edition of his well-known work: "There are few operations which have had such ardent partisans and detractors as trachelorrhaphy . . . It seems to me beyond question that trachelorrhaphy when properly performed can be followed by no bad result, even though it possessed no advantages; it is very probable, in fact, that it has often been practiced uselessly." This is rather faint praise for an operation to which we have been accustomed to assign such importance. What is the explanation? Is it because abdominal surgery has entirely overshadowed plastic work? We might infer this from the contemptuous manner in which the great Birmingham surgeon dismisses trachelorrhaphy, though he has shown much skill and ingenuity in the direction of other minor gynæcological operations. But this wholesale condemnation is not confined to foreign surgeons. The expression "uterine tinkering" has frequently been applied on this side of the

¹Read before The New York Obstetrical Society, March 21, 1893.

water to the work of those who are still conservative enough to believe that some diseases of the pelvic organs may be attacked from the vaginal as well as from the abdominal side. There is unquestionably a growing tendency to undervalue, and even to abandon, the operation for the repair of the lacerated cervix.

Now, I believe that the reason for this is to be sought for not among the enemies but the friends of the operation. Ultra-enthusiasm, as shown by the whole history of medicine, has injured every striking discovery and original procedure by awakening opposition to it at the outset, when calm consideration would have established its claims upon a true and permanent basis. American scientists are distrusted because they are too apt to adopt every new method and to generalize on insufficient evidence. Review the extensive literature of trachelorrhaphy since Dr. Emmet read his original paper before the County Society, in 1869, and you will be convinced that gynæcologists have followed out the course which he indicated "not wisely but too well," forgetting too often the limitations of the operation upon which he insisted then and has ever since. It was with the object of eliciting a frank and unbiased expression of opinion on the part of the Fellows with regard to their present attitude towards this old question that I have ventured to bring it forward again this evening, at the risk of introducing much that has been rendered elementary by frequent repetitions in text-books. So much confusion seems to have arisen in the minds of general practitioners as to the indications for the operation, by reason of the wild and reckless statements which they find in society discussions, that it is highly important that we should ascertain how we stand. Let us try to definitely settle the question whether trachelorrhaphy is to maintain a certain position in gynæcology or is to be entirely overshadowed by the glamour which surrounds abdominal surgery. I trust that I shall be pardoned if my deductions are founded entirely upon the results of my own observations. Personal experience alone justifies a personal opinion.

In the performance of every plastic gynæcological operation the surgeon has or should have three definite objects in view—to repair an existing lesion, to prevent future trouble depending upon the lesion, and to cure the symptoms which are due directly or indirectly to it. It is manifest that this includes more than the mere relief of present symptoms, which is to the patient usually the sole important object to be attained. The surgeon looks beyond the present. If he is satisfied with the restoration of anatomical integrity, or with the temporary

relief of pain alone, he takes too narrow a view of the case and does not consult the best interests of the patient. I think that we can trace many of our failures to a want of appreciation of these elementary facts in considering the indications for operative interference. It is not necessary to define the word "failure" in the broader surgical sense, since you will all admit that it may follow an operation that has been flawless in *technique* and perfect anatomically. We fail when we do not attain the result at which we aim.

All of us who have spent several years in attendance upon out-door clinics can recall cases in which lacerated cervices have been previously repaired in the most satisfactory manner by experts and yet the patients have assured us that they could see little if any difference in their symptoms. While in some cases it has been impossible to tell why no apparent benefit followed the operation, in the majority a thorough review of the patient's history and a careful physical examination have convinced us that the laceration of the cervix was only one, and the least important one, of several co-existing pathological conditions which were really the cause of the trouble—such as retroversion, disease of the ovary, perimetritis, et cetera. Or there may have been present a general neurosis such as no operation, or series of operations, would have affected. In other words, the operator either mistook the indications for trachelorrhaphy, or else regarded it as the only treatment in the given case. This leads us to ask the old question, which has been so frequently answered by teachers and text-books of gynecology: "What are the indications for Emmet's operation?" It has always seemed to me that Mundé has given the fairest and most comprehensive answer of any writer, in the excellent chapter upon laceration of the cervix, in his work on "Minor Surgical Gynecology." He summarizes thus: "The significance of a cervical rent as a cause of uterine disease lies not in the existence of the rent itself, but solely in the symptoms which it produces, and in the direct influence which can be traced to it as the prime factor in the production or maintenance of some pathological condition or functional derangement in the pelvic organs or elsewhere in the body."

1. The results at which I have aimed in repairing a lacerated cervix have been in the order of their importance: 1. To prevent the development of malignant disease. 2. As an important step in the cure of subinvolution and its attendant evils. 3. As a tentative measure to relieve reflex neuroses that appeared to be mainly of uterine origin.

The more that I study cancer of the ^{*}cervix uteri, the more I am convinced that in order to accomplish any permanent good we must attack the disease at its inception—or, still better, before. Experience only seems to strengthen our conviction that Doctor Emmet was right in emphasizing the fact that extensive laceration of the cervix with resulting erosion is the local stimulus to the development of epithelioma in this region. There certainly is a pre-cancerous stage when Emmet's operation (not Schroeder's which is an entirely different procedure) thoroughly performed will save the patient from the doubtful chances of a more radical procedure. This is a trite statement, but that it is not yet appreciated by the general profession is evident from the histories of the majority of the cancer cases which are referred to us only after they have reached the inoperable stage.

2. It would hardly seem to need any argument to confirm the fact of the curative effect of trachelorrhaphy in subinvolution, though no less an authority than Tait scouts at the idea. This is not a matter for argument; it is a question of clinical observation, the accumulated mass of which, attested by scores of gynæcologists, forms a solid basis of fact on which we may safely rest. But, it has seemed to me that the most important point has been lost sight of, i. e., that the repair of the lacerated cervix is only one step in the treatment. Trachelorrhaphy does not cure endometritis, it does not replace the heavy uterus, neither does it restore the tone of the relaxed pelvic tissues. It is simply an adjuvant, not a direct means of cure. In our treatment we often do best to reverse the pathological order and make the repair of the initial lesion in the cervix one of the later steps.

3. With regard to the third indication—the elimination of reflex nervous symptoms by the excision of the so-called “cicatrical plug,” there exists a wide difference of opinion, even among the ardent supporters of the operation. While many careful and conscientious observers testify to the remarkable beneficial effects resulting from it in this class of cases others, equally reliable, agree with the conclusion reached by Goodell, ten years ago, that we shall often be disappointed in our expectations of removing the “Symptom-complex” in this simple way. The neurologists have proved to us that the co-existence of various neuroses with pelvic disease by no means implies a direct causal relation between the two. Our many failures in the past to benefit neurotic patients, as much as we had hoped, by oöphorectomy have taught us caution in promising positive results from gynæcological operations. But even the most skeptical must admit that he has seen

two or three cases in which a lacerated cervix was, if not the sole cause of the nervous symptoms, at least the principal factor, so that its repair could fairly be regarded as a necessary and essential part of the curative treatment. An additional indication for the operation mentioned some years since by Goodell is the presence of "stubborn and subacute peri-uterine inflammation," which, he frankly admits is regarded by most conservative gynæcologists as a positive contra-indication. Doubtless this excellent and honest teacher has modified his opinions in the light of subsequent advances in our knowledge of pelvic pathology, since we now look for disease of the adnexa as the cause of such "stubborn inflammation." I cannot avoid the conclusion that many of our disappointments after trachelorrhaphy are due to our operating under just these conditions. Now that we have ceased to fear peri-uterine indurations as a source of acute inflammatory trouble following trachelorrhaphy, we have more opportunities than formerly to study the influence of the operation *per se* upon such indurations. I deplore the persistent use of the terms "subacute" and "chronic" peri or parametritis preferring to speak of an acute inflammation and of the induration, thickening, exudation (whichever you prefer to call it) that results. I have never been able to understand how "subacute peri-uterine inflammation" in this sense can be cured by repairing a lacerated cervix.

Having briefly reviewed the ordinary indications, let us glance at the contra-indications, or rather at the conditions which do not render the operation dangerous but, we may say, neutralize its good effects. I assume, of course, that septic infection after trachelorrhaphy is, or should be, a thing of the past. In a paper read at the first meeting of the Woman's Hospital Alumni Association in 1886, I endeavored to show that circumscribed indurations in the broad ligaments were not in themselves contra-indications to the performance of the cervix operation, and that the serious and, in a few cases fatal, results which I observed after trachelorrhaphy were due to sepsis, and not to the "lighting up of fresh cellulitis." I think that many of us will now deny this. The impunity with which the pelvic organs may be attacked under modern asepsis has entirely removed our fear of intra-pelvic indurations and adhesions. But, while we do not assign as much importance to these as formerly from a surgical standpoint, subsequent experience has taught me that I was wrong in saying that Doctor Emmet exaggerated their importance. Clinically they are by no means insignificant, since their presence may entirely vitiate the result of an operation which is

surgically perfect. How often have we seen a cervix restored to normal condition and yet the patient complaining of precisely the same pains as before. It is small satisfaction to her to know that the operation has been "successful" if she has not obtained the promised relief. I have been especially interested in these cases, and, being naturally of a pessimistic turn of mind, have studied them with special object of trying to discover if they did not prove that the operation, as an operation, was a failure. But almost invariably the history of the patient and the local examination before and after the repair of the cervix have shown that the pain was due to the result of previous peri-uterine inflammation which had not been eliminated but remained practically the same as before. The subject of inflammatory adhesions naturally leads to that of fixation of the displaced uterus or adnexa as a contra-indication. I doubt if there are many of us who are absolutely guiltless of disregarding this. Confident in our asepsis, we sometimes yield to the temptation to repair a lacerated cervix when the uterus is not only retroflexed but somewhat adherent. How can we expect an entirely satisfactory result under these circumstances? The records of our clinics show that while the uterus is frequently reduced in size after the operation, the symptoms due to the displacement persist and entirely overshadow the slight benefit accruing from the operation. Again we operate when there is an enlarged and prolapsed tube or ovary, or both, adherent or not adherent, and promise relief to the patient from trachelorrhaphy when not a tithe of their symptoms are due to the cervical lesion. You have all seen these cases and know how strong is the temptation under the fierce competition of our over-crowded profession to find an excuse for operating, confident that if we do not, our neighbor will not scruple to advise it. It is indeed difficult for a gynecologist to be entirely honest with himself and his patient nowadays. Delay, the suggestion of a course of preparatory treatment previous to operation, the expression of doubt as to the propriety of surgical interference, or the giving of a guarded prognosis, perhaps in direct opposition to the opinion of a more progressive confrère—such an attitude is often fatal to our financial hopes though in the long run it may be more profitable even from a low utilitarian point of view.

Now, it may be that we have not recognized any positive contra-indication until the patient is under ether. It cannot be too strongly impressed upon the general profession that the pelvis should be thoroughly explored previous to every gynecological operation.

the last moment serious and unexpected conditions may be found which would lead a careful and conscientious surgeon to refrain from operating. Having received a few disagreeable lessons I now never neglect this precaution. It is hardly necessary to remind an audience of experts of the *technical* errors to be avoided in the performance of the operation, since you have been so thoroughly instructed in all its details. But, it is to the neglect of these familiar details that many of the so-called "failures" are due. The surgeon blames the operation, when he alone is at fault. I need not enter into particulars. A few suggestions will be enough. I never realized how much there was in the cervix operation until I tried to instruct practitioners, both on the cadaver and on the living subject, who had never performed it. No two cases are exactly alike. There is quite as much room for the exercise of judgment as in an average cœliotomy. There is also abundant opportunity for the application of aseptic precautions—a fact which we have only recently begun to realize.

I believe that in the majority of cases, especially when the uterus is large, we would do well to curette the uterine cavity thoroughly repairing the cervix (previously dilating the canal, if necessary) and, to irrigate rather than to apply pure carbolic acid or iodine to the raw surface. Curettage, in my experience, assists materially in hastening the process of involution which we hope to initiate by the trachelorrhaphy.

Many occasional operators are too timid; they simply skin the edges of the tear, instead of taking out a deep wedge. Their object appears to be simply to make the cervix "look well," regardless of the ultimate object to be attained in the removal of all the diseased tissue. It would seem as if Doctor Emmet and every writer who has followed him had made the point too plain to require further elucidation. The same principle should guide us here as in the amputation of the cancerous breast—entire removal of the disease first, æsthetic considerations afterwards. That too many sutures are too often used and that they are twisted too tight is well known. The caution not to seal up the cervical canal is by no means superfluous, especially after complete excision. It has been done by the most expert operators and may make the patient's latter state worse than the first.

Many a good operation in the past has been spoiled by too rigorous after-treatment. When I was an *interne* in the Woman's Hospital the patient received two douches daily, the result of which was sometimes to actually wash the wound open. I have seen wound surfaces separ-

ate when the sutures were removed, on the seventh or eighth day, though they were perfectly healthy and the convalescence was afebrile. If the perineum had been repaired at the same time the zealous nurse was liable to damage that by her oft-repeated douches. Fortunately we have learned to apply the same principles to gynæcological surgery as to midwifery, i. e., if the patient, the operator and the instruments are clean at the time of the operation, the patient should be left severely alone afterward. I have certainly seen far better results since I have abandoned vaginal douches after both gynæcological and obstetrical operations. Doubtless we nearly all subscribe to Mundé's view that it is better to leave the cervix sutures *in situ* for at least two weeks. And this leads me to refer to combined operations upon the cervix and perineum. I believe that the late Doctor Hunter was the first to perform them systematically at the Woman's Hospital and his results, as you know, were exceptionally good. Although not an enthusiastic believer in the so-called "combined operations" in gynæcology, I have invariably followed this plan, which is now so universally adopted, that in private practice most patients would seriously object to two séances, even if the surgeon insisted upon it. So far from having any bad results follow, I think that they are actually better, because the patient is kept quiet longer and the cervix is not disturbed for two or three weeks, while sagging of the uterus is prevented by the restoration of the pelvic floor. All these are purely elementary facts to you, but they do not seem to be regarded, except theoretically, by the general profession, who are the severest critics of the operation, since they demand immediate and positive results. If I were asked to state briefly the reasons why both surgeon and patient are often disappointed in the ultimate results of trachelorrhaphy I would say: Too many men make the operation the first step in the treatment of complex pelvic trouble instead of the last; they operate upon improper cases, where the symptoms are due not to the cervical lesion, but to accompanying complications; they consider that their work is finished simply because a perfect result has been obtained from a surgical standpoint when replacement of the uterus and the insertion of a pessary or the treatment of ovarian or peri-uterine trouble is still required; lastly either honestly or not they promise too much.

We shall be less likely to err if we bear in mind the caution given by Doctor Lee eleven years ago: "In the selection of cases of trachelorrhaphy we should be guided solely by the pathological import of the laceration and its probable influence upon the pelvic condition."

Unless I am deceived in respect to the trend of opinion among honest and conservative gynæcologists, I prophesy that so far from rachelorrhaphy being classed among the operations which some are pleased to denominate "uterine tinkering," it will maintain its position as a rational and indispensable surgical procedure. It will probably be performed less frequently as we learn more the true relation between symptoms and intra-pelvic lesions, and the indications and contraindications will be more strictly defined. Moreover, we shall come to be more cautious in regard to prognosis and shall teach our patients that the operation is not necessarily the final step in our treatment.

SYMPHYSEOTOMY: ITS TECHNIQUE AND AFTER RESULTS, WITH A REPORT OF TWO CASES.¹

BY EGBERT H. GRANDIN, M.D.

New York.

The clinical experience of two hemispheres justifies the enrollment of symphysiotomy amongst the obstetric operations. It enters the lists as the special antagonist of embryotomy and it displaces the Cæsarean section under the relative indication. *Per se* the operation entails no other risk than that associated with every surgical procedure and through its timely performance still-birth, the result of pelvic dystocia, may be reduced to a minimum, as also the untoward effects of undue pressure on the foetal brain.

The points I chiefly wish to emphasize in this brief paper are: 1. The preferable technique of the operation; 2. The ultimate result at the pubic symphysis.

1. *Technique.*—Beginning at the pubic eminence an incision extending upwards should be made in the mid-line down to the recti. The recti should be separated by the fingers and the handle of the scalpel. The index finger is inserted into the retro-pubic space and hooked under the symphysis. A metal catheter in the urethra strongly depresses this organ to one or another side. The symphysis is next incised from above downwards and from without inwards by a blunt-pointed scalpel down to the sub-pubic ligament under which rests the finger which protects the bladder. If the foetal head has not engaged at the brim or, in case it has engaged, if it can be pushed upwards, the slender Galbiati knife devised

¹From the Transactions of The New York Obstetrical Society, April 4th, 1893.

by Harris should be carried under the sub-pubic ligament and this is severed by upward traction. In the event of foetal engagement there is scarcely sufficient space for both finger and knife under the pubes and the danger therefore is that the bladder may be injured. Under these circumstances I believe it better practice to incise the sub-pubic ligament from above downwards against the projecting finger. The sub-pubic ligament must be severed, otherwise there is no increase in the pelvic diameters. After delivery of the foetus, in approximating the pubic bones, a very essential precaution is to depress the urethra thoroughly else it may be nipped and injured to a greater or lesser extent. The incision in the tissues is brought together by deep and by superficial sutures. A broad bandage, extending below the trochanters and preferably of adhesive plaster maintains apposition efficiently.

This method of operation will answer in every case where the symphysis is normal in structure. In the event of ankylosis, it becomes a question of pubic section, that is to say, of sawing through the rami of the pubes. It is further to be borne in mind that the symphysis may not be straight, but more or less oblique and irregular. Therefore the necessary armamentarium for this operation should include a saw.

Ultimate result.—An avoidable sequela of the operation of symphyseotomy is fistula of the urinary tract which either heals spontaneously or calls for after-repair. The chief question we have to face is the effect of this operation on locomotion. The cases so far recorded make no mention of disability. The uniform statement in regard to the European operations is "close apposition, no mobility," and a similar verdict is written by the American operators whose cases have been reported. It would seem, therefore, as though we were justified in assuring possible subjects for symphyseotomy of the absence of untoward after-effects. And yet I show you to-night a patient who forty-four days after an uncomplicated symphyseotomy tells you that she is conscious of motion at the symphysis. On the thirty-seventh day after operation I could myself detect slight motion at the symphysis when examining this patient in the erect position, walking. To-day, as far as I can judge, mobility is absent although the woman's subjective sensations do not corroborate me.

I append a brief report of the two patients I show you to-night; referring you for full details to the American Journal of the Medical Sciences (May 1893).

CASE I. Operation at the New York Infant Asylum, February 11th, 1893. Patient a nullipara, aged 19, at term. First stage of labor

complete; membranes ruptured for four hours. Strong uterine contractions but no advance of presenting part. Foetal heart 160 and irregular. Maternal pulse 120 to 128. Pelvic measurements:

Spines - - - - 8 $\frac{3}{4}$ inches.
 Crests - - - - 9 $\frac{1}{4}$ "
 Beaudelocque - - 7 "
 Diagonal Conjugate 4 "
 Conjugata vera - 3 $\frac{1}{4}$ "

Careful forceps traction fails to accomplish more than to just engage the presenting head. The child's condition being critical symphiseotomy was elected and performed. Measurements of foetal head:—

Bi-temporal - - - - 3 inches.
 Bi-parietal - - - - 3 $\frac{1}{2}$ "
 Sub occ.-bregmatic - - 3 $\frac{3}{4}$ "
 Occ.-frontal - - - - 4 $\frac{1}{8}$ "
 Occ.-mental - - - - 5 "
 Circumference - - - - 13 $\frac{3}{4}$ "

Posterior fontanelle had disappeared and anterior fontanelle was reduced two-thirds usual size. Female child weighing 7.1 pounds.

Forty eight days after operation the woman walks and runs and complains of no disability. The child is alive and thriving.

CASE 2. Operation at the New York Infant Asylum, February 20th, 1893. My colleagues, Drs. R. A. Murray, H. C. Coe and G. W. Jarman saw the patient in consultation and sanctioned symphiseotomy. Patient, aged 23, nullipara, 4 feet 7 inches in height. Premature labor by about four weeks. Pelvic measurements:—

Spines - - - - 9 $\frac{1}{2}$ inches.
 Crests - - - - 9 $\frac{3}{4}$ "
 Beaudelocque - - 6 $\frac{3}{4}$ "
 Conjugata vera - - 3 $\frac{1}{4}$ "

After symphiseotomy delivery by version. Diameters of foetal head:

Bi-temporal - - - - 2 $\frac{3}{8}$ inches.
 Bi-parietal - - - - 3 $\frac{1}{8}$ "
 Occ.-mental - - - - 4 $\frac{1}{8}$ "
 Occ.-frontal - - - - 4 $\frac{1}{8}$ "
 Sub.-occ.-breg - - - - 3 $\frac{3}{8}$ "
 Circumference - - - - 13 "
 Living male weighing 5.1 pounds.

Forty-four days after operation close apposition and no apparent mobility. Patient walks well but complains of sensation of motion at symphysis. Child alive.

36 East 58th Street.

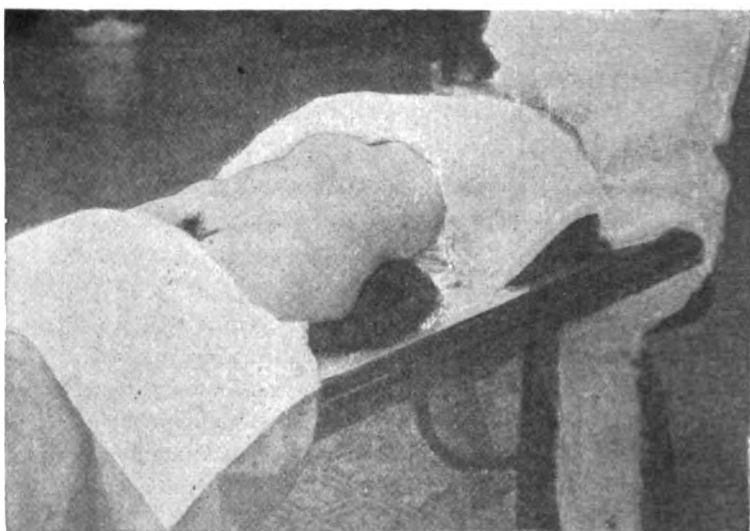


FIG. 1.

The normal abdominal outlines for the sake of contrast with succeeding cases of enlarged abdomen.

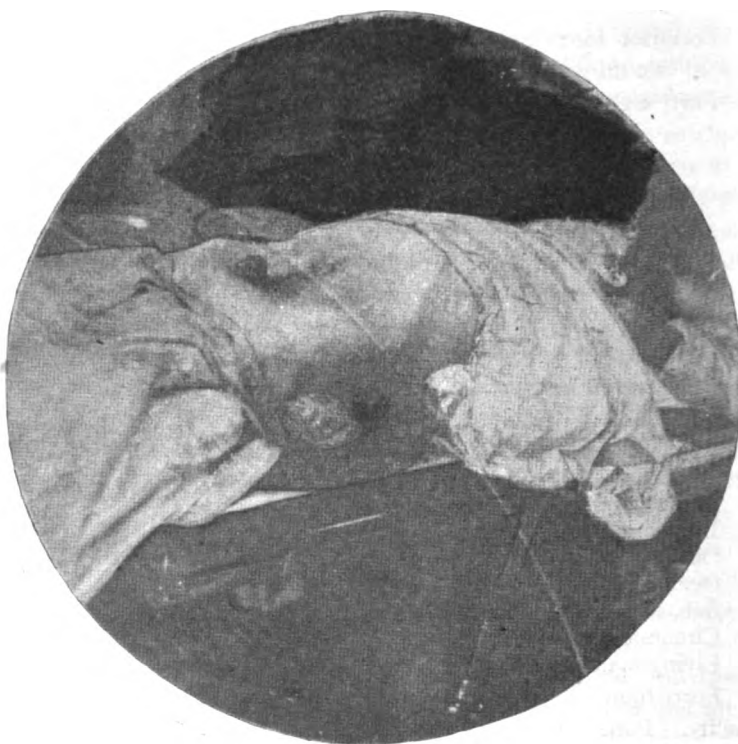


FIG. 2.

An abdomen made scaphoid by the removal of a large fibrocystic tumor. The mass is a gauze drain. This shows the reverse of the conditions to be studied.



FIG. 3.

Globular distension of the abdomen by an ovarian cyst, seen from below.

A PRELIMINARY REPORT ON THE MORPHOLOGY OF OVARIAN AND MYOMATOUS TUMORS.¹

BY HOWARD A. KELLY, M. D.,

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I will offer no apology for presenting for the consideration of the Southern Surgical and Gynecological Society any facts relative to the life history of ovarian and myomatous tumors, affections which are so constantly before the members from a severely practical standpoint.

I use the word morphology in a broad non-technical sense to include changes in the contour of the patient's body caused by these tumors, as well as peculiarities in the form and disposition of the tumors themselves. I propose, therefore, briefly to consider certain characteristic peculiarities produced in the (a) form of the abdomen, (b) peculiarities in the disposition, or packing away of these tumors within the abdominal cavity, and (c) peculiarities of form assumed by these tumors in so far as they are affected by the constraining con-

¹ Delivered at the meeting of the Southern Surgical and Gynecological Society at Louisville, Ky., November 16, 1892.

stricting influences of their environment ; in other words the extent to which they are capable of being moulded by the pressure of neighboring structures.

(a) Characteristic Traits Evident Upon Inspection of the Abdomen

The general tendency of tumors growing out of the pelvis and extending up into the lower part of the abdomen is to produce marked distension of the lower abdominal zone, at once evident to the eye and readily recorded by measuring the distance from the umbilicus to the

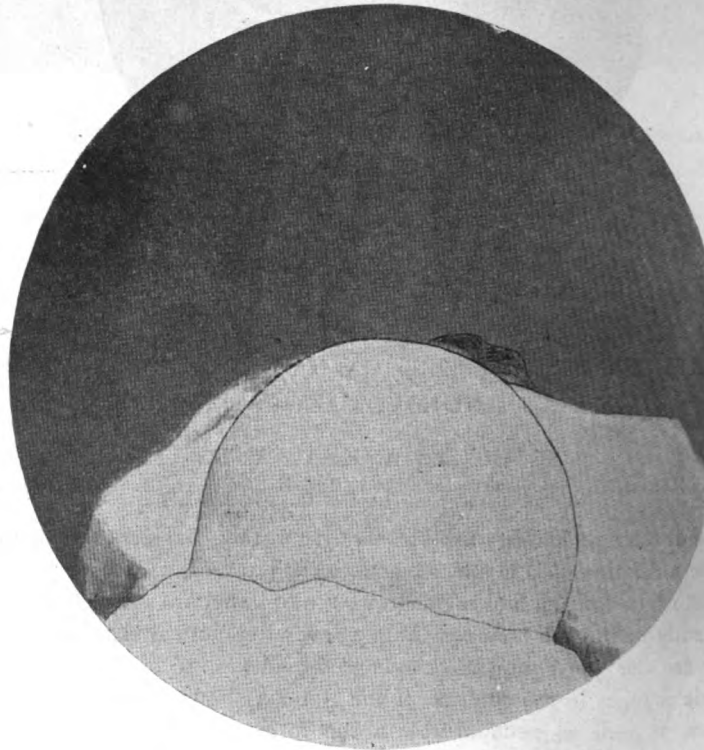


FIG. 4.

Marked example of the globular distension of the abdomen by an ovarian cyst in an old woman.

anterior superior spines and symphysis, which is increased beyond normal, while the distance from the umbilicus to the sternum and remains proportionately but slightly, if at all, changed. This ge

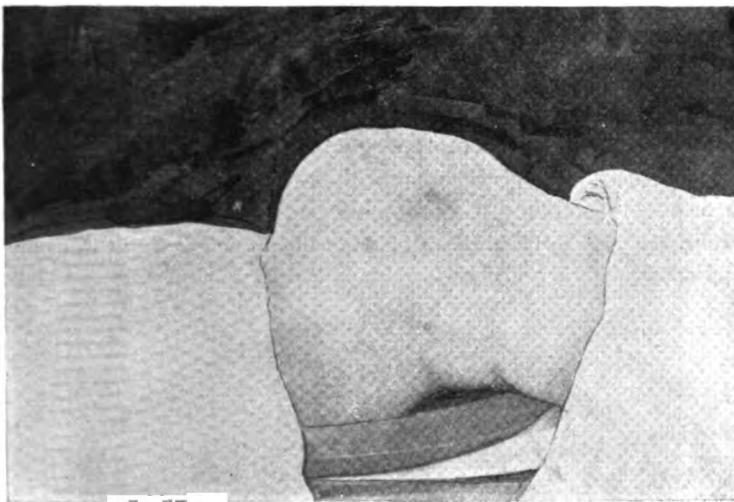


FIG. 5.

The large bosses of an ovarian cyst in a young girl. The tumor seen in profile.

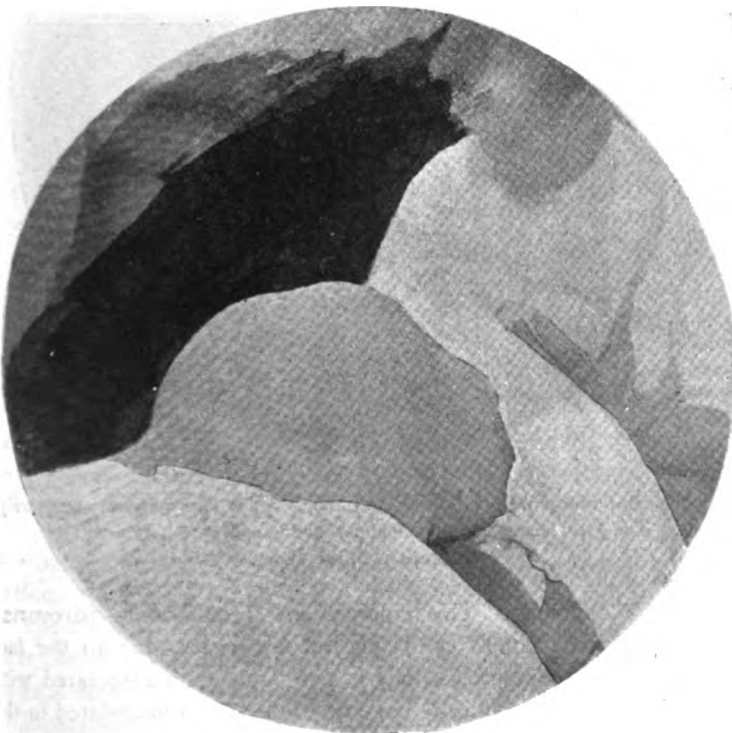


FIG. 6.

A quartering view of the tumor shown in profile in Fig. 3, showing the large bosses.

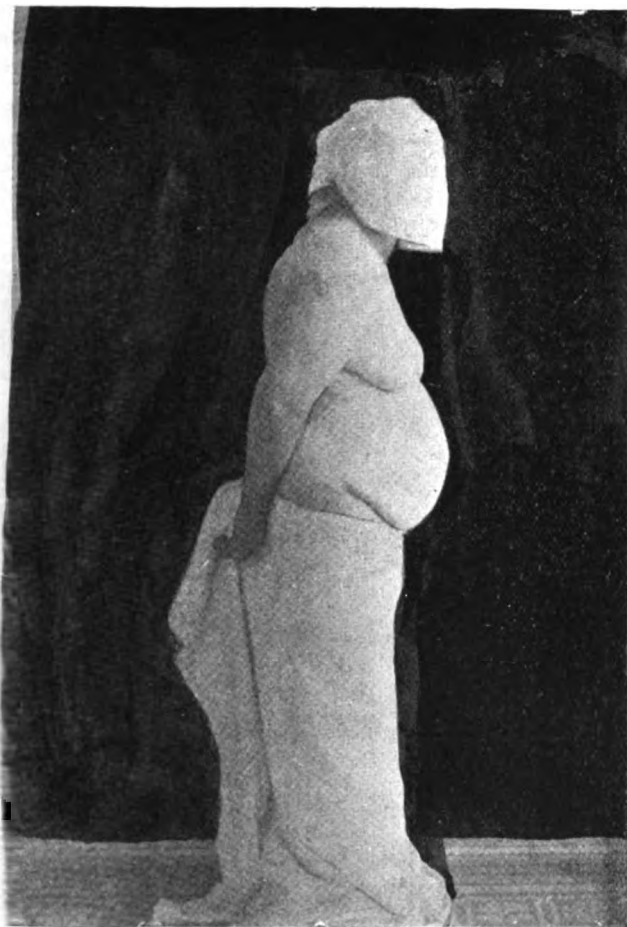


FIG. 8.

The **same** patient shown in Fig. 5 after removal of the tumor. The difference in outline is simply the patient minus the tumor.

the **smaller** ones lie in the flanks and consequently do not show on the surface.

The alate or winged-shaped chest is due to a pushing out of the lower ribs, and is a characteristic of any mass big enough to distend the entire abdominal cavity.

Prominent exceptions to the general rule just enunciated that pelvic tumors distend most markedly the inferior abdominal zone are the

notable stretching of the upper abdomen in very fat women with ovarian tumors, and the like distention of the abdomen in dwarfs in advanced pregnancy.

Myomata being less yielding retain more prominence in the navel line, and often look like a pregnant uterus, striking differences, however, are the breadth of the tumor and a peculiar abruptness of the upper outline.

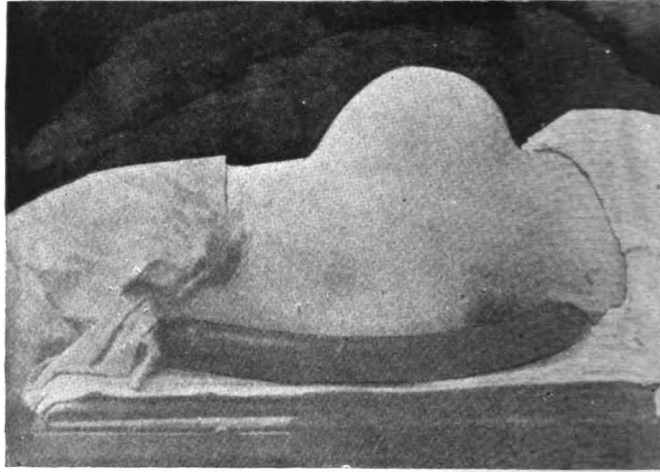


FIG. 9.

Shows well the vertical outlines of a myomatous uterus. Note especially the abrupt border.

Nodular Myomata on the other hand stand out in marked contrast to the smooth outlines of cystic tumors in giving to the lower abdomen a lumpy bossed appearance, thus exhibiting through muscles and skin a softened exaggeration of their irregular outlines. This peculiarity still remains prominent although softened, after these tumors have undergone fibro-cystic degeneration.

The contrast of the globular outline of the ovarian tumor with the more or less bossed appearance of a large fibro-cystic tumor is well shown in one of our photographs.

The flattened ovoid of an ascites, which is no tumor, shows a striking difference between an enlargement contained in its own wall and one free and without definite form in the abdominal cavity.

It is well to bear in mind, however, that occasionally a si

ascitic accumulation will distend the abdomen prominently in the median line, presenting a deceptive appearance, a close mimicry of the encysted tumors.

(b) The Disposition of Tumors in the Pelvis and Abdomen follows the Laws of Accommodation.

The problem presented is that of a body with a smooth surface and of varying degree of mobility, contained within an irregular cavity with a smooth lining and subjected to frequent movements of succussion—the law is, that the body in question finally assumes a position best adapted to its form, subject to the single restriction of its attachments or adhesions.

Small ovarian tumors up to the size of a goose egg commonly lie on the same side from which they originate.

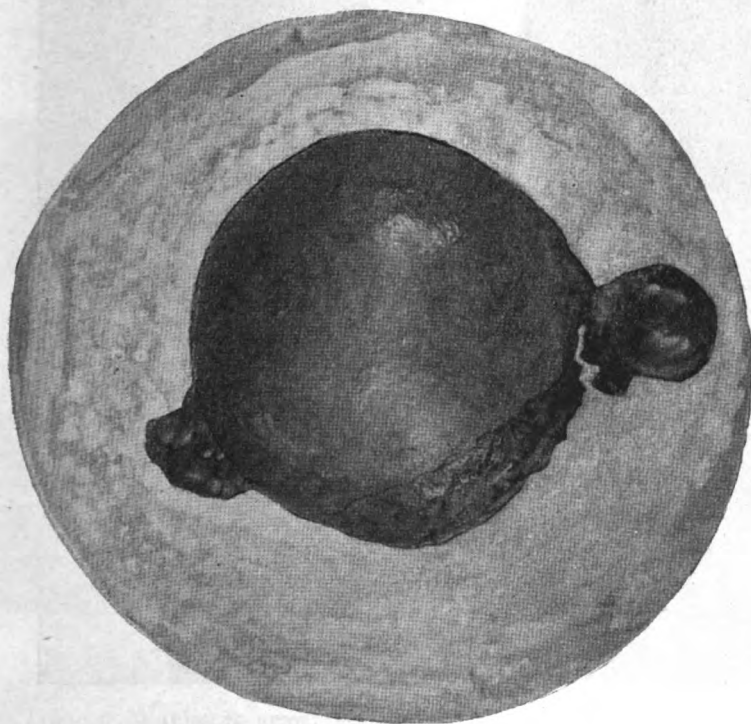


FIG. 10.

The uterus from the patient seen in Fig. 8. The ovarian tubes are seen on either side.



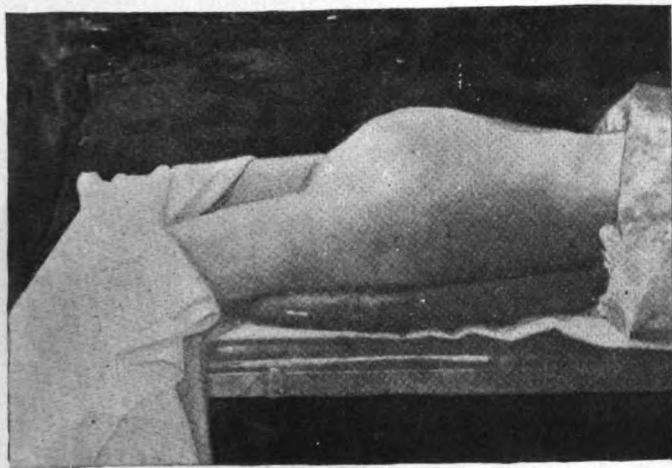


FIG. 12.

A myomatous uterus lifting the lower abdominal zone forward. The hazy line from the umbilicus to ensiform is diagnostic, as it shows by contrast the splinting of the lower abdominal zone by the tumor.

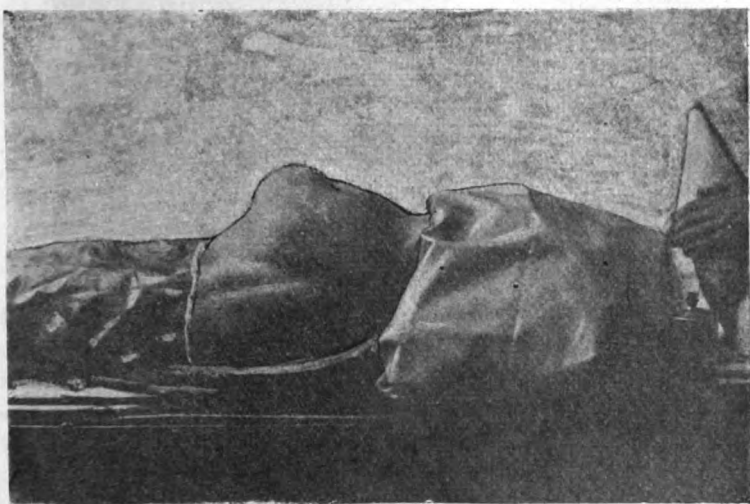


FIG. 13.

The nodular outlines of a large fibrocystic tumor.

Upon continuing to grow, the cyst at first extends over on to the opposite side of the pelvis, and then proceeds to enlarge upwards into the abdominal cavity. As soon as the cyst leaves the side on which it originated, it commences to put traction upon its pedicle thus pulling



FIG. 14.

The same fibrocystic mass lifted out on to the abdomen and before removal.

the uterus towards that side. By thus shortening one fornix the opposite fornix is made wider, and the tumor is thus in this case more easily palpated through the vagina *on the opposite side* to its attachment and the natural but erroneous inference in attempting to locate it that it is a right or a left sided tumor according as it is felt more easily on the right or left side.

The facility with which the simpler monocystic and some jelly-like tumors accommodate their form to their surroundings may be well seen by noting the effect of gravity outside the body, where they at once collapse into a flattened ovoid mass.

In the body such cysts as well as the softer myomata often bud out of the pelvis and bud out into the abdomen until they assume the shape of a gourd or a clove with short stem and big head. Within the

abdomen they are ovoid or flattened ovoid, according to the distension of the sac.

Cystic tumors filling the pelvis and a part of the abdomen are rarely found to originate in some upper abdominal tumor. I have here for demonstration a photograph of an enormous kidney, containing over a gallon of pus, extending from the pelvic floor up through the abdomen and pushing up the left ribs.

Polycystic ovarian tumors, left to grow until they extend above the umbilicus, if not detained by adhesions, are most apt to lie markedly displaced to the right side. The explanation of this peculiarity is the same as that I have suggested for the right obliquity and torsion of the uterus in advanced pregnancy. The tumor is simply displaced over



FIG. 15.

A paunched abdomen containing neither fluid nor tumor, but closely resembling an ovarian cyst.

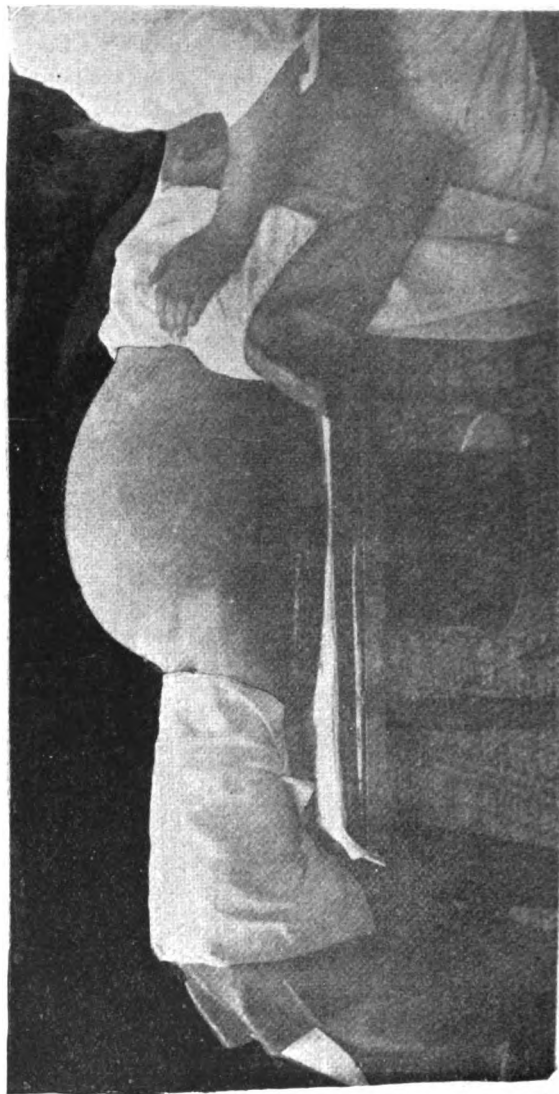


FIG. 16.

The flattened abdomen of an ascitic accumulation due to carcinosis of the peritoneum.

on to the right side by the stomach, for the repeated soft impacts of the constantly alternately enlarging and contracting stomach are far more potent than the tendency of gravity to keep it forward in the median line, or the tendency of the movements of the patient to dispose of it in some other position. For the same reason in big ovarian tumors

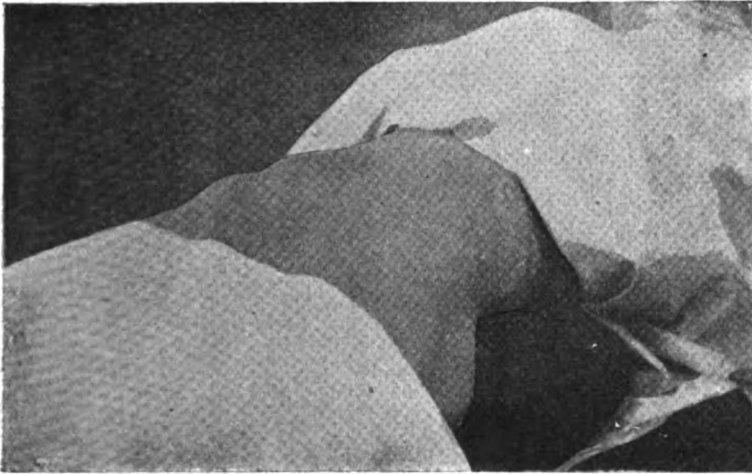


FIG. 17.

The lump seen on the right side is a dense myoma uteri, the larger portion of which is wedged in the pelvis.

an enormous sac will sometimes be found directly under the concavity of the liver snugly fitting convexity into concavity. This dextro-position of the tumor will not be apparent on the surface before opening the abdomen, when a distended stomach compensates the inequality, and gives the surface a uniformly rounded appearance.

The disposition of the intestines in the case of tumors rising from the pelvis is peculiar and worthy of note. They are at first crowded up above away from the front, and then out into the flanks. The omentum and transverse colon lie in front of or across the upper part of the tumor, which thus, almost always remains infra-omental.

The disposition of myomatous tumors is interesting. Not infrequently one or more remain fixed in the pelvis where they grow until they choke vital organs and threaten the life of the patient. There is a peculiar sort of myoma often met, which tends especially to occur



FIG. 18.—The same abdomen shown in Fig. 16 but here shown from a quartering view. The dark spot is the umbilicus,

in women who have borne children when they develop myomata, appearing as a more or less uniform enlargement of the whole uterine body, assuming the appearance and characteristic position of the pregnant uterus, bellying out the abdominal wall in the median line in front.

(c) Form Changes in the Tumors Themselves.

Multiple myomata usually lie like saddle-bags hanging one on either side in the iliac fossæ and the groins, this is due to the more or less rigid linea alba which always tends to find the sulcus between two tumors.

Although myomata are among the densest tumors met with, they often show the impress of the structure with which they have been in constant contact during their growth, in a remarkable way. Thus, I have seen a distinct sulcus about sixteen cm. long, caused by the constant pressure of the linea alba running up the length of a large tumor. Of course, upon extirpating the tumor I observed the sharp unyielding fibrous linea exactly fitting this sulcus, and noted further that the sulcus did not simply arise from the junction of two myomatous nodules.



FIG. 19.

The same patient shown in Fig. 18, with the tumor lifted up out of the abdomen but not removed. The top of the tumor in the picture rested on the floor of the pelvis. The nodule near the operator's right hand caused the prominence on the skin in Fig. 18.

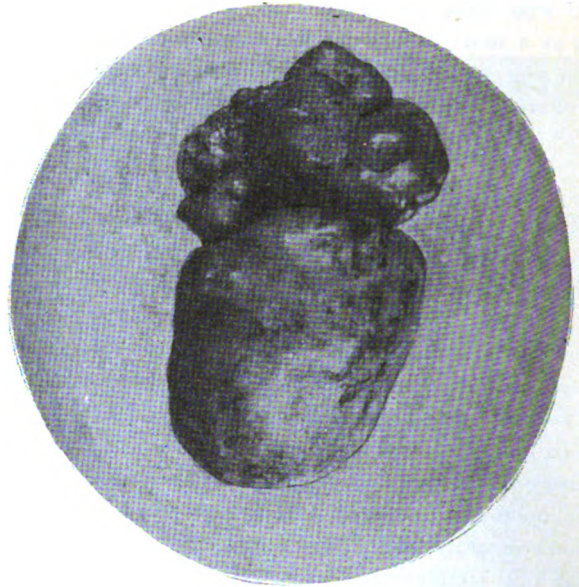


FIG. 20.

A profile view of the tumor seen in Fig. 19. The upper nodular mass lay in the abdomen. The lower mass is a myomatous cast of the pelvis. The right side exactly fitted the sacral curve in the median line. Suppressed nodules are seen on the surface of this tumor.

Again, I have seen a broad myoma with its back broken, as it bent over the promontory of the sacrum and the lower lumbar vertebrae, showing upon removal on its posterior surface an exact mould of the broad vertebral ridge.

To show how fruitful and interesting such observations may be, the following points of interest were culled in one day out of many. In the first case, a small nodule was lying in the posterior surface of the uterus near the fundus, which it had toppled over causing a retroflexion; in the second case the myomatous uterus was of the size and form, with the exception of a little greater breadth, and almost of the consistency, of an advanced pregnancy. Another case was a large subserous fibroid tumor filling the pelvis and rising up into the abdomen as if it overflowed the pelvis like molten wax. The remaining case was a multinodular myomatous mass, proved most interesting from the point of this investigation. The tumor had formed a dense attachment

by one of its nodules, to the rectum low down in the pelvis. The rectum, however, was displaced and dragged over into contact with the right pelvic wall. This anomaly could only be explained by assuming that the myomatous nodule had originally occupied a position in the median line where it adhered to the rectum, and later in some way it had become rotated to the right and dragged the rectum with it. This interpretation was borne out by the further observation that the body of the large uterus reaching up to the umbilicus was rotated one-fourth way round from right to left, so that the right tube and ovary lay under and parallel to the linea alba. This dextrotorsion of the uterus was explained by the fact that the linea alba lay in a groove about two cm. deep between two large fibrous nodules, the only masses found on the fundus, one in front, an old hard white nodule about five cm. in diameter,

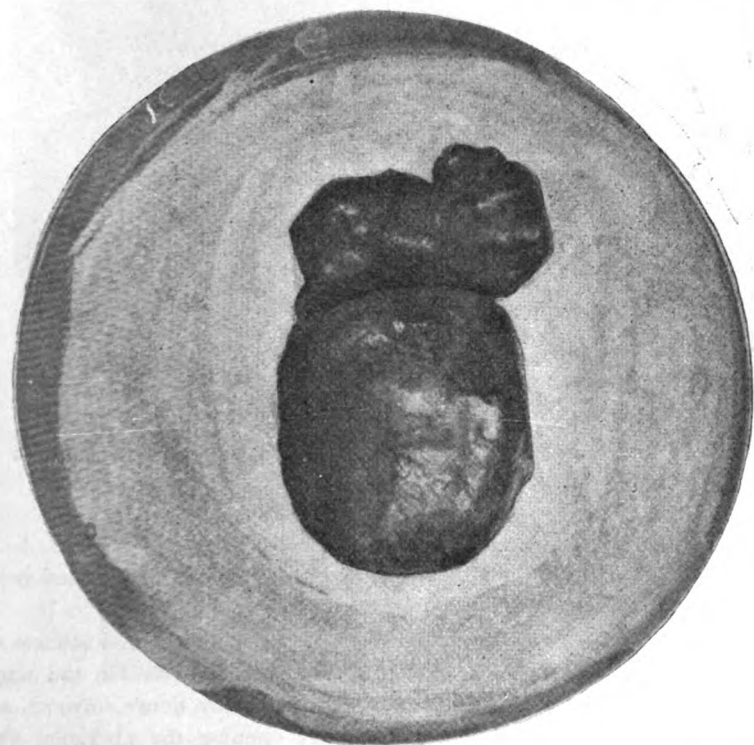


FIG. 21.

The same tumor shown *à posteriori*. The breadth of the tumor is the breadth of the pelvis, and the surface visible is a cast of the surface of the posterior half of the pelvis including the sacral hollow.

and one posterior, redder and more succulent, about eight cm. in diameter. The explanation is briefly this: Originally there were two polypoid nodules, one anterior at the fundal extremity, and one posterior at the cervical extremity. The latter became adherent to the uterine wall. Later a large nodule developed posteriorly at the fundal end, and, growing rapidly, pushed the uterus up out of the pelvis and pushed the mass anterior to the fundus forward until it came under the fibrous peritoneum alba, which, striking its smooth convex surface, deflected it to the right side, thus rotating the uterus and dragging the cervical nodule and rectum over to the right side.

In this explanation I am confirmed by her physician, Dr. J. H. Brandt, of Pennsylvania, who has kept her under close observation



FIG. 22.

several years, that the big mass on the right side, has been noted by himself and the patient as of recent growth.

One of the most remarkable and yet not uncommon instances of this adaptation to environment is shown by a case still in treatment at The Johns Hopkins Hospital. An unusually dense myomatous mass choked the whole pelvis, and after opening the abdominal cavity it was extracted with patient persistence and the use of considerable force, and only after partly breaking it off from its pedicle near the uterus, although there were no adhesions. Its attachment with that of

FIG. 23.



other nodules was near the fundus, but this particular nodule had been caught in its growth beneath the promontory of the sacrum where it continued to develop until all the pelvic viscera were compressed and the patient reduced to a pitiable condition. You will observe in the photograph the irregular anterior surface adapted to the cervix and lower part of the body of the uterus; the posterior surface, however, is as exact a model of the sacral concavity as could be obtained by pouring plaster into the pelvis and filling it from floor to brim. This is beautifully shown both in profile and full view taken from behind.

This brief study is only intended to be suggestive. One of its objects is to stimulate closer observation of details in these important cases which we are now-a-days handling in such wholesale fashion.

A CASE OF PORRO'S OPERATION FOR A UNIQUE INDICATION.

BY G. ERNEST HERMAN, M. B. LOND., F. R. C. P.

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President of the Obstetrical Society of London.

The publication of Dr. C. A. Van Ramdohr's rare and interesting case in the March number of the *NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS*, induces me to send to that Journal the following record of a case in my own practice which was somewhat similar, but, taking all its peculiarities together, a unique one:

On March 2nd, 1893, I was called to E. H., aged 36. Labor pains had begun at 8 a. m. The membranes ruptured at 9 a. m. I saw the patient at 4 p. m. Strong labor pains were recurring every three or four minutes and the pulse was 140.

The cervix uteri was high up behind the symphysis. The os was elongated transversely. The cervix was pressed forward by a hard rounded tumor the size of a cocoa-nut, lying in the hollow of the sacrum, between the vagina and rectum. The tumor was quite immovable. A trocar was put into it, but nothing came out. Therefore it was clear that natural delivery was impossible.

The patient was removed to the London Hospital, and as soon as the necessary preparations could be made Cæsarian section was performed at about 6.30 p. m.

On opening the uterus, the thinness of its anterior wall was remarked. The child was decomposing.

After extraction of the child, the cavity in which it lay was found to be divided into two parts by a septum running transversely and rising four or five inches above the pelvic brim. The part of the uterine cavity in front of this communicated with the cervical canal. The part behind it ended in a cul-de-sac about on a level with the pelvic brim. The child had lain with the abdomen downwards, doubled across this septum.

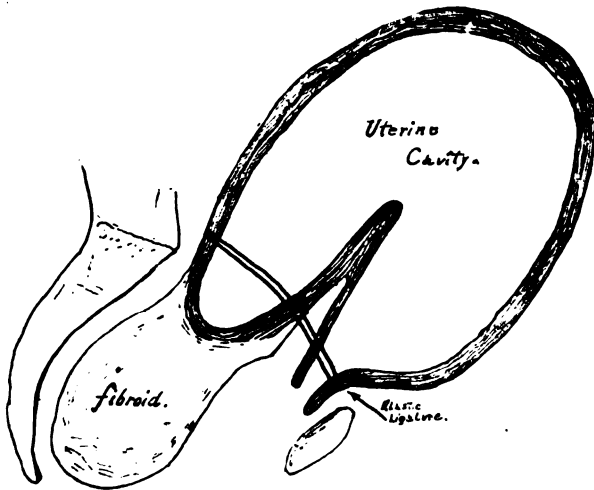


DIAGRAM SHOWING UNIQUE INDICATION FOR PORRO'S OPERATION.

This singular state of things caused me some perplexity, as I did not at first recognize what the condition was. Being uncertain, Porro's operation seemed to me the safest thing. An elastic ligature was therefore put round the base of the sac in which the child had been, that is, round the cervix and fundus uteri, and the part above the ligature was cut away.

Examination of the part removed and consideration of the state of things found while operating showed clearly what the condition was.

The uterus had been retroflexed by a fibroid attached to its posterior wall. This had become—whether by adhesions or not I do not know—incarcerated in the hollow of the sacrum, and had prevented the fundus uteri from rising. The uterus had consequently remained retroflexed, and its cavity had enlarged at the expense of its

anterior wall. The septum which had divided the uterine cavity was cut at the spur at the angle of flexion.

The pulse at the beginning of the operation was 140. The amount of blood lost during the operation was not great. The patient was not quicker after the operation was over than at the beginning. It did not afterwards become accelerated but got weaker and weaker and the patient died four hours afterwards.

Permission to make a post mortem examination was refused by the patient's friends. But the tumor was incised from the vaginal piece of it cut out and examined microscopically. It showed the structure of a fibro-myoma.

It is difficult to say whether Porro's operation was or was not the best treatment in this case. The inclusion of so large a mass in the elastic ligature must have aggravated the shock of the operation. But, on the whole, I think it was, for had the uterus been sewn up without the ovaries removed, the patient would have been exposed to danger of a different kind. I should not have felt confident that the tumor of the uterus would have remained contracted, nor could I have contemplated without fear the possible retention of lochia, in the fixed retroverted uterine body and the consequences of such retention.

ABNORMAL CONDITIONS OF THE VISCERA CONTAINED WITHIN THE ABDOMINAL CAVITY, WHICH MAY SIMULATE AND MAY BE MISTAKEN FOR DISEASES OF THE UTERINE APPENDAGES.¹

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This title covers so much ground that to consider all of it in an essay would make a volume of many chapters. My aim, for the present, is to refer to some of the changes that have taken place in the views of gynæcology in the past ten years and, at the same time, to state some of the facts which have formed the main basis of the changes more especially, those facts chiefly learned by actual incision of all the viscera of the pelvis and abdominal cavities where the peritoneum has been opened.

¹Read before the New York Academy of Medicine, Nov. 3d, 1892.

Eight years ago in my paper on salpingitis read before this Academy, the very radical views I then advocated, namely, that almost all the many cases which up to that time we had been taught to consider as *chronis cellulitis*, due to exposure, cold and imprudence, during menstruation, etc., were nine times out of ten really cases of salpingitis and ovaritis caused, as a rule, by an extension of the septic or venereal disease directly from the endometrium to the lining membrane of the tubes; that pelvic abscesses were, as a rule, intraperitoneal and with rare exceptions were merely the sequelæ of a salpingitis and ovaritis and, practically speaking there was no such disease as a chronic cellulitis; that where there were decided indications of the formation of pus, or when the patient was rendered bedridden by what was then called chronic cellulitis, the best way to cure her was to open the abdomen and remove the diseased tubes and ovaries. To-day, these views are generally accepted and practiced by almost all gynecologists or, at least, by all who are trained in modern surgery. Based upon what I had seen by opening the abdomen, in this same paper I predicted that before many years had passed the practice and teachings of our leading gynecologists on uterine disposements would be found radically wrong in many essential particulars, especially the exaggerated importance attributed to the influence of uterine displacements in causing disease, and that in time the many hundreds of pages on this subject in our text-book would sink to small proportions. Later, in my paper on Antelexion and Its Associated Pathological Conditions, I pointed out the fact that the real cause of the subjective symptoms in the many cases called and treated as antelexions was not the flexion at all but a chronic form of endometritis which resulted in an indurated and hyperesthetic condition of the endometrium at or above the os internum; that the aim in treating these cases should not be an endeavor to straighten the flexion, but that the correct principle of treatment was precisely the same as a good surgeon would apply to an old sinus or pyogenic tract, viz.: free divulsion, curetting and drainage. At the same time I advocated the use of the steel-dilators in place of the uterine tents and vaginal tampons, for the tent and tampon both violated, next to cleanliness, the greatest law of modern surgery, namely, drainage; besides they were liable when uterine contractions came on to force back the pent-up secretions and blood into the Fallopian tube. I advised the use of the steel-dilators, not only in cases of chronic endometritis associated with antelexion but in all forms of chronic endometritis where any kind of intra-uterine

treatment was indicated and advocated the use of a hard and firm drainage-tube to overcome the tendency to contract of the powerful sphincter muscle at the os internum, so as to secure the best results from drainage.

I cannot yet claim that all of the changes predicted have been made in our text-books, but text-books rarely show radical changes, or even always established progress, unless such changes have been accepted by the older and more renowned leaders; for, as a rule, the authors of text-books are not always original, progressive, and practical workers, but are likely to be good scholars, who accept with reverence and perfect faith the works and writings of the recognized masters with influence, whose teaching they know so well. To fully realize the immense and radical changes that have taken place among the active and coming leaders of gynecology, one must not rely upon the text-books but read the reports of the gynecological and obstetrical societies of to-day and compare them with those of ten or even six years ago. One may attend many meetings and never even hear the word chronic cellulitis nor see a new pessary. Surgery leads in all branches of gynecology, and most of the morbid specimens exhibited are the products of laparotomies. Papers on uterine displacement are rare, while rapid dilatation and uterine drainage are just at present the fashion.

Some of the older members of our societies frequently complain that abdominal surgery smothers out all other topics in society meetings. One must admit this as a fact, but real progress is seldom made except as the result of enthusiastic, persistent, and concentrated attention to the question to be settled.

Excessive zeal, it is true, often leads to errors and mistakes and may excite the rash and incompetent to abuse a good medicine or operation, and it may even afford a temporary cover to an imposter, but all this is because we are human and does not justify the stopping of progress by conservatism, whose aim should be to direct earnest work to a practical success in correcting the errors of the older views and a rational application of the new facts toward preventing and curing disease.

It must be admitted that surgery improved and purified by asepsis, antiseptics, and drainage, has enabled us to open the abdominal cavity with a comparatively slight risk of life and has practically revolutionized modern gynecology in the short space of ten years. What I should wish to do in this paper is to point out certain facts, observed in great

part while seeing and handling the viscera of the pelvis and abdomen when making laparotomies.

For many years, I have considered anterior displacements of no special pathological significance and that the influence of retro-displacements have been and are still greatly over-estimated. Many subjective symptoms of local pain, dragging sensations, and many reflex disturbances of the nervous system commonly attributed to uterine displacements, are really due to other pathological conditions of the uterine tissues, and often such symptoms if not directly due to are at least greatly exaggerated by the abnormal, prolapsed and diseased conditions existing in other viscera such as the rectum, intestines, omentum, and kidneys. Formerly, and even to-day, many gynæcologists make correcting the displacement the chief aim in treating all such cases. It is true that correcting a retroversion by means of a pessary will give some relief, but rarely will this effect a cure even when it is perfectly done by a master in fitting pessaries. In many cases, even though we go a step further and cure any associated uterine disease, such as chronic endometritis, many of these various symptoms brought on by standing or exercise, and reflex disturbances to the nervous system and digestion which we have been taught to believe are caused by displacements of the uterus, still persist and the patient goes from one gynæcologist to another, until some one discovers in one or more of the organs the real cause of the suffering.

Mistakes of this kind are made not always because we fail to correct any uterine displacement or cure uterine disease, but because as specialists we are prone to limit our investigations to the organs we make a specialty of treating and thereby over-look disease or abnormal conditions in other organs causing the same or very similar subjective symptoms. The gynæcologist who undertakes to cure patients even of minor uterine diseases should have an accurate knowledge of rectal diseases and also appreciate the fact that prolapsed and dragging intestines, omentum and kidneys, together or separately, may cause many of the worst reflex disturbances so very generally attributed especially to uterine displacements, that one or more of such abnormal conditions will be found, as a rule, complicating most of the old chronic uterine diseases, particularly among the many cases giving a history of chronic constipation.

Formerly, and even yet, one hears of cases diagnosed as retroversion with adhesions and teachers to-day may be found who advocate the use of the uterine repositor and the breaking up of the adhesions,

the aim being to replace the displaced uterus, thereby expecting to cure all the patient's symptoms when they can force the uterus into the ideal normal position. Now, any one who has had the privilege of opening the abdomen of many of these cases called retroversion with adhesions knows that it is a fact that, nineteen times out of twenty, such cases are merely cases of salpingitis and ovaritis of one or both sides, and if it were practical to break up or even to absorb the adhesions without opening the belly, it would be sure to expose the patient to an acute attack of peritonitis, by tearing or bursting or bringing in contact with the peritoneum and its contents the disease in the tubes or ovaries which nature had prevented by these adhesions, so commonly spoken of as the disease itself. Besides, any capable observer who has seen the abdomen open in such cases can testify that in the greater part of them not only is the uterus displaced, but that the omentum and intestines, both large and small, are abnormally prolapsed and crowded into every crevice of the pelvis; they are markedly congested, often adherent and fixed far below anything like their normal positions, and dragging on the stomach and other organs above, perhaps the solar plexus—the very centre of the sympathetic nerves—besides being frequently associated with the displaced right kidney or the inflamed and adherent vermiform appendix. These facts make it absurd to attribute most of the objective symptoms to the uterine displacement and place all our hopes of curing the patient upon placing the uterus in the ideal normal position.

When there is a uterine displacement uncomplicated by adhesions in the pelvis caused by salpingitis, one cannot speak so positively about the exact condition of the other pelvic and abdominal viscera because we rarely have the chance to examine them with the abdomen opened. However, a close study of these cases will reveal the fact that in many of them after we have cured the actual disease of the uterus itself, so as to enable the patient to wear a pessary without intolerable pain or discomfort, the pessary fails to cure the local dragging sensations or relieve the reflex disturbances. Most of such cases are found in two classes of women; one of them will be small, imperfectly developed women with the characteristic small anteфлекed uterus rolled backward or prolapsed near the mouth of the vagina, they give a history of delicate general health, especially when they were changing from girlhood to womanhood, and are almost always constipated. They belong to the better classes who begin lacing early. If you will examine the rectum, you will with rare exceptions find the mucous membrane hemor-

rhoidal and it will either show a chronic fissure or will readily crack in several places on the slightest dilatation. In some, hyperæsthetic spots will be found on the mucous membrane of the rectum that bleed at the touch. If you will take the trouble to send them to undress and make a complete examination, you will find a movable right kidney. If you pump air into the stomach or colon it will show that it is displaced downward. The other class are women who have borne children, perhaps several, when they are in bad general health and have flaccid and more or less pendulous bellies, with rare exception, suffering from obstinate constipation. Although the perineum may not show much tearing, it will be relaxed with the normal support to the lower end of the rectum inefficient and the sphincter ani firmly grasping a hæmorrhoidal mucous membrane and refusing to open without causing a fissure. A dose of oil may bring away hard round balls covered with mucus and showing more or less chronic colitis or an overstretched large intestine. Examined in bed, we are quite sure to find a loose kidney and a distended and prolapsed stomach. In such cases it is plain that the inability to stand or lead an ordinary life without local dragging sensations, backache and reflex, nervous, and digestive disturbances is as much due to the abnormal condition of the other viscera as to a displacement of the uterus, and to bring about a cure we must do more than put the uterus in place. For years past, when a new patient comes to me and I fail to find a local disease sufficient to account fully for all marked symptoms, after making the usual examination on an office examining table, I send the patient to a room, have her undress, and then examine carefully the abdomen. In this way, I have been able to make out many abnormal and diseased organs that otherwise would have been overlooked. In examining for a movable or diseased kidney my plan is to sit the patient upright with her legs hanging down and her body leaning or bent forward, and twist her shoulders from side to side; then with my left hand I press with the fingers from behind in the region of the twelfth rib, and at the same time with the fingers of my right hand I press backward under the free border of the ribs and then bring the fingers of my two hands as near together as I can. When I have done this, holding my hands in position, I have my nurse or assistant put her right arm around the patient's shoulders and the left one under the knees and lay the patient on her back and instruct the patient not to use her abdominal muscles. When the patient is on her back with her knees up, I then bring the thumb of my left hand forward and make it keep up the compressing under the free border of

the ribs and carry my right hand downward over the right side of the abdomen, and if the kidney is only displaced I generally detect it before moving either hand, but if it is at all freely moveable I soon find it with my right hand and can readily define its outline as it passes upward under pressure and jumps more or less into place. When the patient is under ether, this method of examining will reveal any kind of movable kidney, while the usual method of examining without raising the body of the patient upright will frequently fail, for the pressure made to find the loose kidney only pushes it into its normal place. In the two classes just described as the feeble constipated and imperfectly developed type and the flaccid worn-out multipara, constipated and with subinvolted vagina and relaxed and congested intestines, a moveable right kidney is the rule and to be able to feel both kidneys hanging below the free border of the ribs is by no means rare. Taking women as they come to my private hospital for treatment and examining the abdomen as I have described, a movable kidney can be found in from fifteen to twenty per cent. of all examined. To determine the position and size of the stomach or colon, pump them full of air.

In examining the cæcum, if it is very tender to the touch or you make out any enlargement over the vermiform appendix, watch the movements carefully for blood or mucus.

Examining patients in this way last winter I found two cases of chronic typhlitis in women where it was not even suspected, for all the symptoms were believed to be due to uterine displacements.

In some women impacted fæces distending and acting on the mucous membrane of the colon will cause pelvic congestion, pain on the left side and on standing and walking, and reflex disturbances to the digestion and mental depression with even more certainty than a displaced uterus. In two cases, after I had cured all signs of uterine disease, I discovered the real cause of the patient's suffering. It requires much care and patience to cure such cases. Those cases suffering from sensitive semi-ulcerations in the rectum are apt to be still more confusing for the pain and other local symptoms are so much like those of a sensitive uterus and the pain on examining the vagina is pretty sure to be considered due to the uterus. The mental anxiety, the depression and inability to stand or walk, is worse than in any subacute uterine disease. As a rule, these cases are complicated by chronic endometritis and it may be with displacement, and it is difficult to determine which was the original trouble. There is but little doubt that the frequent and more or less chronic congestion of

the pelvis induced by chronic uterine disease, and the enforced limitation of requisite exercise, and also the reflex disturbances to the digestion, soon get the bowels out of order and are in time pretty sure to cause hemorrhoids, constipation, etc. But as almost all of the cases I see are complicated by uterine disease when I first examine the rectum, I cannot say that chronic rectal disease will cause uterine disease although I can understand how it might at least render its functional activity abnormal and with other influences intensify, if not cause, any uterine disease. I do not wish to be understood as saying that the existence of hemorrhoids or other rectal diseases always gives the symptoms as a rule supposed to be due to uterine displacement, nor do I mean to say that every movable kidney or dilated stomach, etc., will account for the reflex disturbances that may be present. Unless the displaced kidney has become diseased by the presence of a stone, suppuration, or a new growth, or is associated with other prolapsed organs, such as the stomach, bowels and omentum, and perhaps drags on the sympathetic nerves, or perhaps by pressure near the cæcum partially obstructs the small intestines and thus causes marked reflex disturbances, it may exist and cause no special trouble. When there is pus or blood in the urine, the displaced kidney may need surgical treatment, but without these indications before I am willing to propose the operation for fixing the kidney in place all other existing conditions at all likely to induce the extreme reflex disturbance to the nervous system must be removed. Still I believe there are some cases that cannot be cured without fixation of the kidney.

In the past eight years, since I have been in the habit of extending my local examinations over the whole pelvis and abdomen, I have detected many abnormal and diseased conditions which accounted for the subjective symptoms, that others had overlooked or that I had not observed until my treatment for the uterine or supposed ovarian disease had failed to relieve the symptoms. I can readily give characteristic cases illustrating how common it is for us to make mistakes by assuming that all such symptoms are caused by either uterine displacement or ovarian disease. Two years ago I was called to New Haven to see a young woman eighteen years old, who two years before had undertaken to train herself for public singing. She gradually lost her color and strength and her menses stopped. She was seen by a specialist who treated her for supposed uterine disease for one year, but there was no improvement and gradually she became helpless, bedridden, and greatly

depressed. I made a careful examination and found the uterus and appendages free from any disease. There was not even an eroded os uteri, or a displacement, but I found the anus and rectum very sensitive. She was sent to my hospital and I learned that for two years she had pain and bleeding when the bowels moved. Under ether the rectum was dilated and large bleeding hæmorrhoids were exposed. They were tied off and the patient well fed, and she gradually was induced to take proper exercise. She made an uninterrupted recovery and in three months menstruated normally. Mrs. B., a widow, came to me from Pittsburgh. She had a child several years ago. For several years she had some excess of menstruation and was most of the time constipated. For a year or more she had become extremely nervous and at times depressed to such an extent that her friends considered her nearly insane. Examination revealed an abnormally large uterus which bled at the touch of the sound. She was etherized, the uterus was curetted, some diseased glands cut out of the cervix and a slight laceration closed. The anus was dilated and great care taken to improve her general health and regulate her bowels. Instead of being fully cured she still complained of pain on her left side, over the region of the ovary, and thought she was going insane. In making a careful examination of the abdomen I discovered some very sensitive spots at points along the transverse colon and I suspected colitis. A large dose of oil brought away some of the characteristic hard balls of mucus and she was treated for colitis by special diet, laxatives, blisters, etc. and was much improved. After staying at home for six months she returned and was finally completely cured of her excessive nervousness and melancholia and was taught how to regulate her bowels.

Two years ago Miss R. came to me giving a history of excessive menstruation and gradual failure of her health. She was quite thin and complained of dragging pains about the pelvis, backache, pain in the back of her neck and top of her head. She had been treated for several months by an eminent gynaecologist but was not cured. I soon corrected the uterine disease and she was for a time better, but at times she would have marked local pain and some diarrhoea, and after this her old symptoms would return. There was some displacement backward, but it seemed to me to be due to a general relaxation of all the pelvic tissues. While making a careful examination of the abdomen, I discovered a slight induration near the crest of the right ilium which was painful when touched, and as she was quite thin I thought I could make out an abnormal condition of the appendix or cæcum. By

watching the movements we soon diagnosed an old typhilitis and a few months later an acute attack was diagnosed by Dr. Janeway. Later it was easy to trace many of the patient's worst symptoms to this disease and its bad influence on her digestion. Last winter I diagnosed two very similar cases, and I am satisfied that there are many such cases overlooked and the symptoms treated for uterine or other diseases.

STUDY OF A CASE OF PLACENTITIS.¹

BY R. S. WIENER, M. D.

New York.

Mrs. A. B. became my patient in July 1891. I was called to attend her immediately after she was delivered of a dead foetus.

As a girl she had always been in excellent health, her family history was good. Married in October 1890, and becoming pregnant in the following December, she was prematurely delivered in the seventh month. During her pregnancy she had been subject to fainting spells, was extremely anæmic and constipated. Her puerperal convalescence was normal.

In the autumn of 1891 Mrs. B. was repeatedly and carefully examined, no evidences of any hereditary taint were discovered. She was anæmic, of sallow complexion; had no uterine, ovarian, or renal trouble; after being placed upon a tonic regimen, she improved in every way.

The husband was subjected to a careful examination with negative results so far as syphilis or any hereditary disease were concerned; a chronic cardiac lesion was found.

In May, 1892, Mrs. B. became again pregnant and was much troubled by nausea and faintness; these ailments were however corrected by appropriate treatment.

A vaginal examination was made every four to six weeks showing that the uterus had increased in size in the normal proportion. The urine was normal at all times.

¹Read before The New York Obstetrical Society, April 4th, 1893.

In the middle of September, Mrs. B. felt foetal motion for the first time. Her general appearance, color and appetite had improved considerably. From this period she was examined every three weeks for the evidences of foetal life which were always present, being marked as the pregnancy advanced. At the end of the first week of December Mrs. B. sent for me; she told me that for two days previous she had felt more life than at any time, in fact excessive motion in periods of an hour or more, and then intervals of rest; but since the twenty-four hours the motion had entirely ceased. A careful examination proved negative as far as any evidences of foetal life were concerned. Foetal heart sounds and motion were absent. This condition was found at successive examinations made during the next week. The foetus had evidently died.

On December 18th, labor began at six o'clock in the evening and a small macerated foetus was born. Placenta came away within fifteen minutes, and a fair quantity of muddy liquor amnii was discharged. Normal convalescence.

Skin.—Foetus macerated and judging from its size was about seven months old. No discoloration of any kind was discovered upon the macerated skin, nor were there any traces of scars or blisters.

Liver.—The liver was not enlarged and showed neither scars nor nodular growths.

Spleen.—Was of average size.

Lungs.—Negative.

Owing to the macerated condition of the liver and lungs the sections did not stain well, but as far as can be seen they present normal histological appearances. No miliary gummata; the blood vessels show no evidences of endarteritis.

The epiphyses of the femur were very soft and loose, line of demarcation between bone and cartilage not very sharply defined. The cartilage very much injected and succulent.

The umbilical cord shows no irregularities, no macroscopic signs of atheroma. Microscopic sections show no endarteritis, no gummatous infiltrations in any of the blood vessels.

The placenta was small, tough, leathery, and resistant to touch. It showed no marked evidences of hemorrhage or fatty degeneration. The placental vessels show in a high degree the various stages of arteritis, both endarteritis and peri-arteritis.

In almost all of the vessels of the sections examined the intima is thickened, in some still infiltrated with round cells, while in others it had already undergone fibrous thickening. As a result of this process the calibre of the vessels is greatly decreased, in some entirely obliterated, leaving a fibrous cord. From one-third to one-half of all the vessels are affected in this way. In a number of places the villi have no blood vessels at all, no trace of them being demonstrable.

The placenta materna is crossed by broad bands of fibrous tissue indicating an old inflammatory process.

Among the large cells of the decidual tissue small groups of round-cell infiltration are discernible, though very infrequent. In no part of the tissue examined are there evidences of fatty degeneration, nor can any traces of chalky metamorphosis be found.

It is evident from this demonstration that the changes in the placental blood vessels resulting in their obliteration made the function of the villi impossible and, thus preventing the supply of nutriment to the foetus, caused its death.

The question of paramount importance is what caused these changes to take place? What caused this placentitis? for I believe we can justly call this process an inflammation of the placenta.

It has been denied by many authors that inflammation of the placenta can take place, because the factors necessary to bring about inflammation (according to Cohnheim's theory) are wanting in placental tissue, *i. e.*, there are no capillaries in the maternal portion—neither are there nerves to govern the dilatation of the capillaries in the foetal tufts. However the fact remains that an increase of connective-tissue elements takes place in both maternal and foetal portions and such changes can be justly called inflammatory. According to Robin and Ercolani an abnormal development of fibrous tissue takes place and produces what is called an interstitial placentitis. In conjunction with this the fibrous degeneration may have its seat in the placental villi; the mucous tissue in the interior of the villi becoming converted into fibrous tissue. The ultimate result of this process is a fatty degeneration on account of the lessened blood supply and we have what is called the fibro-fatty placenta.

In 1873 Frankel claimed to be the first to demonstrate that the process described above by Ercolani and Robin and called by him "granular hyperplasia and hypertrophy of the placental villi" was the most

frequent form of placental syphilis, and that this infiltration of the villi with granulation cells and the consequent increase in size and distorted shapes are characteristic of syphilis and might serve to make certain the diagnosis of the disease.

Kleinwachter, in *Art. Placenta Eulenburg*, describes two types of Placentitis.

I. Endometritis placentalis caused by endometritis prior to pregnancy.

II. Syphilitic placentitis. In this form both the maternal and the foetal placenta are involved; the changes in the foetal placenta consist mainly of inflammatory processes in the villi with thickening of the intima and adventitia.

Kleinwachter says that syphilitic placentitis is rare even in the presence of syphilitic lesions on the foetus.

Whittaker in *Amer. Journal of Obstetrics* Vol. III, pp. 193-300, gives the history of the study of morbid anatomy of the placenta.

In this article he quotes Verdier as describing an arteritis of the foetal placenta, a condition peculiar to syphilis in which the lining membrane of the arterial wall thickens and degenerates until the calibre of the vessel is obstructed.

Gusserow and Klebs (*Virchow Archive* Vol. 27, pp. 321) found marked hyperplasia of the decidua cells in a case in which the father was syphilitic.

Simpson regards fatty degeneration as frequently caused by syphilis.

Ruge in an exhaustive article "*Ueber den Fœtus sanguinolentus*" (macerated foetus), *Zeitschrift für Gynæcologie* 1887, pp. 157 etc., quotes E. Martin as saying that almost all the macerated foeti are syphilitic; also

Birch Hirshfeld (*Archiv für Heilkunde*, Vol. XVI, 1875) as having found 70 per cent syphilitic.

Ruge himself found in the Berlin Lying-in Hospital that out of ninety-four cases of foetus sanguinolentus, seventy-three or eighty-three per cent. were syphilitic. In ten of the sixteen remaining he assigns the following causes:

1. Dysentery of mother shortly before term.
2. Two cases of valvular disease in mother.
3. One case of Endometritis placentalis.
4. One case of placenta apoplexy.

5. Two cases of placenta prævia.
6. One case of faulty insertion of umbilical cord.
7. Two cases of death caused by fall of mother.

The most important anatomical changes in the foetus as the result of syphilitic infection were increased size of liver and spleen with nodular infiltration of surfaces and irregularity in the line of ossification between diaphysis and epiphysis ; but Ruge distinctly remarks that in a number of positively syphilitic foeti these changes in the liver, spleen and bones were absent.

In comparing the results of our own investigation in the case before us with those of the authorities quoted we are forced to concede that the probable cause of the changes in the placenta and subsequent foetal death is syphilis. The microscopical appearances more closely resembled those caused by this disease than the changes seen in what is called "interstitial placentitis," and it is certainly a question which needs further investigation and study whether both conditions are not identical and have the same cause, namely, syphilis.

Although in the case before us a history of syphilitic infection was not obtained, it is well known that individuals do occasionally contract the disease in a mild form perhaps, which does not receive active treatment and thus escapes the notice of the physician or is forgotten by the patient.

Under the circumstances it seems to me justifiable to submit both of these parents to anti-syphilitic treatment so that if another pregnancy occurs a healthy living child may be born.

I am indebted to my associate, Dr. L. Stieglitz for assistance in the microscopical work.

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EDITORIAL.

RADICALISM; CONSERVATISM.

The jingle of catch-penny terms has attracted and deceived a large mass of mankind since the foundation of society, and the intelligence of many a wise man as well as that of the foolish and unthinking has been befogged and led astray in every interest and occupation by the prostitution of the names of things. How many a worthless cause has become a good one have changed places even in the estimation of honest men because of the names which have been put upon them. So well is this peculiar phase of human thought recognized that in every language its significance is crystalized in proverb form, yet though it be, it is seldom in the thoughts of men save for the purpose of proverbial illustration.

It is a fact, and a sad one, that of all the pursuits of men mankind has least escaped this direful tendency. We no longer demand truth, that the moon shall be at full or at a certain quarter, when vegetable drugs are to be gathered; we do not prescribe the use of virgins for its efficacy in certain diseases, as did our predecessors of centuries ago; but we do much worse than this, because we do no harm, in our daily use of the *shiboleth of terms*. To this class, we belong those two battle cries we so frequently hear screamed in our to-day: Radicalism; Conservatism.

As applied to the science of medicine, these terms are a misapplication and a very mischievous one. How can an and intelligent physician be otherwise than conservative? How can he help being radical as well? If medicine were politics and were politicians, then indeed might medical men be so divided. For conservatives endeavor to maintain that which they have or to

that which they had, while radicals strive to obtain that which they have never had. When the radical succeeds, he becomes conservative. It is a game of self-interest. But he would be a bold man who would assert that this principle actuates him who vaunts the fact that he is a "radical" surgeon, or him who prides himself upon his eminently respectable "conservatism." We confess that to us these words in this connection are incomprehensible. How can a surgeon advocate a certain measure because it is called "radical?" how can another reject the same thing because it is not "conservative?" The honest man does this or rejects that because he believes one to be right or the other wrong in itself—one procedure to be for the best interest of his patient, the other not. How, therefore, can he be conservative or radical? It is chiefly in gynæcology and especially among laparotomists that these terms are most in favor, yet who among us would acknowledge that he had refused his patient an operation which he knew to be needed, no matter how radical, and who that he had operated merely through wantonness and a spirit of vain-glory?

If the satisfaction to surgeons of being known by a certain class distinction were all that was involved in the use of these terms, the subject might be relegated to the realm of vagaries, but when we realize how misleading the serious application of them must be to each incoming batch of medical graduates and to the mass of practitioners, who must take their impressions of medical advance from the prominent few, it becomes at once of the most serious import. For nine-tenths of all young men the name "radical" has ever had an irresistible fascination—it embodies for them, in some mysterious way, something bold, free, dashing and brilliant. It implies enthusiasm and contempt for experience. It matters not what the cause if it have but a ringing name. It was the fascination of this name among the youthful nobility of France which prepared the ignorant but practical people for the chaos of the French Revolution; it was this name also which was responsible for the excesses and folly of Byronism in England. And with shame can we easily recall what it has already done in this country in gynæcology. On the other hand, he who is content to sit enthroned upon so-called conservatism is fit only for a niche in a museum.

Let us drop these terms, then, which are so unworthy of scientific men and of a scientific pursuit. Their use is misleading, tends to narrow-mindedness, retards true progress and lowers the moral standard. Let us rather substitute for these the comprehensive terms "honest and dishonest."

IN MEMORIAM.

CHARLES CARROLL LEE, A. B., A. M., M. D., LL. D.

The subject of this sketch was born in the city of Philadelphia on March 24th, 1839. He was the eldest son of the Hon. John Lee, a member of Congress from Maryland. His grandfather, Thomas Sim Lee, was Governor of that State during the Revolution, and after the surrender of Cornwallis he entertained at his private expense, and during the space of a week, the French and American officers at Annapolis.

This series of fêtes, given by Mr. Lee, was a surprise to all who participated in them, but particularly to the foreign officers who declared that they had never witnessed abroad a more lavish expenditure or such remarkably good taste as was exhibited in every detail. Dr. Lee's mother was Harriett Carroll, a grand-daughter of Charles Carroll of Carrollton, one of the signers of the Declaration of Independence, and after whom he was named. He was a member of the Lee family of Virginia, which has furnished to this country, in each generation, an unusually large proportion of noted men,—a characteristic equally as well marked during generations of the family in England prior to their emigration. Dr. Lee's childhood and early youth were spent in western Maryland; his collegiate course was taken at St. Mary's College, Emmettsburg, where he graduated as Bachelor of Arts in 1856. He shortly thereafter commenced the study of medicine in the University of Maryland, but having experienced too many social distractions in Baltimore for the satisfactory prosecution of his studies, he entered, the following year, the Medical department of the University of Pennsylvania, where he graduated in 1859. Within the same year he was given the degree of Master of Arts by his Maryland alma mater, and in 1890 the same university conferred upon him that of LL. D. After graduating in medicine he served successively as House Surgeon in Wills' (Ophthalmic) Hospital, in the Philadelphia Hospital and the Pennsylvania Hospital, all located in the city of Philadelphia. Dr. Lee entered the U. S. Army as Assistant Surgeon in 1863, having recently married Helen, a daughter of the late Dr. Isaac Parrish of Philadelphia. During the civil war his service was in the army of the Potomac, in the Military Hospitals about Washington, and finally he was attached to the Surgeon-General's office in Washington. At the



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termination of the war he was ordered to the city of New York to serve on the Board for examining candidates for the Medical Corps of the regular army. On the completion of this service he resigned his commission and settled in New York. A few weeks later the writer had the good fortune to make Dr. Lee's acquaintance under very peculiar circumstances which led to a close friendship, unbroken to the hour of his death.

The writer was at that time Surgeon-in-chief to the Woman's Hospital, a position then assailed by certain members of the profession who were at least sincere in their belief that they could better serve themselves by obtaining possession thereof and it was only retained "by holding the fort." A wanton and untruthful attack had been made in one of the medical journals of the day reflecting upon his management. After a refusal, by letter, on the part of the editor to give the name of the author, the aggrieved party made inquiry as to the residence of the editor for the purpose of holding him personally responsible. The times have since changed somewhat, while the belligerent was then many years younger and his blood of a more fiery nature than at present. A wrong address being given, the wrong man was called upon and Dr. Lee, with the heartiest outburst of laughter, taking in the situation at a glance, soon turned all wrath aside and the real editor never knew he had escaped a horsewhipping. Very shortly after the occurrence of this episode, Dr. Lee was appointed one of the Assistant Surgeons in the Woman's Hospital. After a continuous service of years he became eventually a member of the Board of Surgeons as the successor of Dr. Peaslee, and after holding this position for some years he was finally obliged to tender his resignation in consequence of the great demands made upon his time by a rapidly increasing private practice. On the acceptance of his resignation, he was appointed by the Governors of the Hospital one of the Consulting Surgeons and he held this position at the time of his death.

In addition to his connection with the Woman's Hospital, Dr. Lee served successively as Surgeon to St. Vincent's Hospital, to the Charity Hospital, to St. Elizabeth's Hospital, Physician to the New York Foundling Asylum, and Surgeon to the New York Post-Graduate Hospital where he also filled at the time of his death one of the chairs of gynecology. After the termination of his surgeonship he still retained his connection with all these institutions by being elected a member of the different consulting boards.

Dr. Lee also served as Chairman of the Medical Board of the

Charity Hospital and of the New York Foundling Asylum; he has been President of the Obstetrical Society, Vice-President of the New York Academy of Medicine and at the time of his death was President of the Medical Society of the County of New York.

His earliest contributions to current medical literature were in syphilology and general surgery. At a later date he contributed quite a number of articles on gynæcological subjects to the Journals of New York and Philadelphia, to the transactions of the American Gynæcological Society, to Ashhurst's International Encyclopedia of Surgery and to Mann's American System of Gynæcology.

Dr. Lee was eminently a strong man, for his fine traits of character were as clear-cut as were his peculiarities. He was a man of unusually diversified literary attainments and had cultivated fully the tastes concomitant upon a most liberal education. His physical development was so perfect and so seldom had he, previous to his last illness, ever experienced the slightest disturbances that it was often difficult for him to appreciate fully the suffering of others from the thousand and one aches and disturbance of function which go to make up the daily life of so many. As a physician he would good-naturedly attempt to palliate such symptoms, which however he honestly believed could be better overcome by the physical or moral efforts of the sufferer. Yet as a medical man Dr. Lee's attainments were far above the average, for he had received so practical a training in early life that he was an accomplished obstetrician, a most skillful general surgeon and an excellent practitioner of medicine based upon the experience of an expert diagnostician. He devoted his attention to the practice of gynæcology more particularly at a later period of life, yet he became a skillful and successful laparotomist. The doctor was a true and trustworthy friend and was incapable, so far as rested with his judgment, of having a mean thought or of doing a mean action. He literally despised a man who was known to be untruthful or noted for trickery and double dealing or who, as a "wirepuller," was always busy in the effort to better his own affairs at the expense of his neighbor. For all such a certain brusqueness of manner about him would become as prominent as the quills of a disturbed porcupine and he kept them at a distance. With an almost unfailing cheerfulness and courtesy of manner under ordinary circumstances he possessed a quick sense of humor and of the ridiculous. Dr. Lee was a practical Catholic, and in a most unostentatious manner practiced the tenets of his religion, so that few in his intercourse with the world ever realized the

incentive which was his guide to duty. The memory of this brilliant and honest man will remain ever bright in the recollection of all who knew him and for those who had the privilege of gaining his friendship his loss will remain irreparable.

THOS. ADDIS EMMET, M. D.

CORRESPONDENCE.

The following is an excerpt from a letter recently received from Dr. J. Clifton Edgar, which referring to a subject of universal interest we take pleasure in placing upon record:

"On Friday, March 24 at 12 P. M., in a tenement-house, and in the presence of the staff of the Lying-in Hospital (314 Broome Street), I performed symphysiotomy upon a primipara for flattened pelvis (c. v 3 $\frac{1}{4}$). The family demanded craniotomy in the interests of the mother, she having been in labor over two days. Mother and child are to-day thriving. I shall present the mother at the obstetric section of the Academy of Medicine tomorrow evening."

RECENT FOREIGN PUBLICATIONS.

FRITSCH, (HEINRICH). *Traité clinique des opérations obstétricales*. Traduit sur la 4^e édition allemande par le Dr Jules Stas (d'Anvers). Préface de M. le Dr Ch. Van Cauwenberghe. Gr. in-8 avec 90 fig. *Alcan.*

HUBERT (EUGÈNE). *Accouchements, gynécologie et déontologie*. Cours professé à l'Université catholique de Louvain. 4^e édition. 2 vol. gr. in-8. (Lierre.) *G. Carré.*

TRANSACTIONS of the Edinburgh Obstetrical Society. Vol. 17. 8vo, pp. 294. Oliver and Boyd (Edinburgh). *Simpkin.*

WEBSTER (J. C.) *Researches in Female Pelvic Anatomy*. Illustrated. 4to. *Pentland.*

WEBSTER (J. C.) *Tubo-Peritoneal Ectopic Gestation*. Illustrated. 4to. *Pentland.*

WINCKEL, F. v., d. kgl. Univ.-Frauenklinik in München in d. J. 1884-1890. *Berichte u. Studien*. Lpzg., Hirzel.

These books may be obtained from L. Heydel, 212 East 50th Street, New York. Delivered in New York at the prices above stated.

THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, March 21, 1893.

H. T. HANKS, M. D., in the chair.

*Unruptured Ectopic Gestation with Hemorrhage into the Sac.
Cæliotomy. Recovery.*

DR. H. C. COE exhibited a specimen with the following history:

Mrs. H., æt. 31, with no history of previous pelvic trouble, was referred to me by Dr. G. A. Spalding of this city, who had made the diagnosis of unruptured tubal pregnancy.

She had been married upward of six years and had had three children, the youngest being fifteen months old. She nursed her baby for eight months and menstruation returned October 6, 1892, the flow being profuse and attended with severe colicky pains. Her physician, a gentleman fully competent to make a thorough pelvic examination, saw her a few days later and could find no enlargement of the uterus or adnexa. The patient menstruated at the usual time in November and December, both periods being normal. The next period was due on January 10, 1893; an irregular flow appeared for two days and was attended with severe abdominal pains. On the 17th there was a slight flow which returned on the 27th, after which date an irregular dark discharge persisted for three weeks. No membrane was passed. The patient (who is unusually intelligent) stated that she suffered all this time with attacks of abdominal pain, never localized on either side, and never so severe as to confine her in bed for the whole day. She had had no symptoms of pregnancy. On February 16th she saw Dr. Spalding who found on examination a distinct circumscribed tumor the size of an orange behind the uterus, which he was confident was not present at his previous examination four months before. I saw the patient on the same day, confirmed his diagnosis of ectopic gestation of at least six weeks' duration and advised early operation, which was performed four days later. On account of the grumous discharge from the uterus I first curetted the cavity of the organ, irrigated and packed it with gauze, removing bits of hypertrophied endometrium, but no pseudo-decidual

membrane, as shown by the microscopical examination. Cœliotomy presented no special complications. The unruptured sac lay behind the right broad ligament, to which and to Douglas' pouch it was firmly adherent. There were a few intestinal adhesions. The wall of the sac was so thin at one point that it ruptured, allowing the escape of a quantity of old blood-clot. Neither a foetus nor its envelopes could be found. The left tube and ovary, being normal, were not disturbed. A large raw surface was left after removing the sac, but neither irrigation nor drainage was thought to be indicated. The patient was up at the end of a fortnight and was discharged three weeks after the operation, being able to take a long journey to her country home. She is now perfectly well.

Convalescence was interrupted during the second week by the development of an extensive induration at the site of the ectopic sac, but this entirely disappeared within ten or twelve days under the daily use of ichthyol tampons; I have found local applications of the drug to be especially useful under these circumstances. The specimen is quite interesting, because a careful microscopical examination at first led me to believe that it was not a true tubal pregnancy at all, but either pregnancy or hemorrhage occurring in a tubo-ovarian cyst. The ovary cannot be found and the fimbriated end of the tube certainly seems to communicate with the sac, but a probe passed through an opening in the lower part of the tube, at the junction of its middle and outer thirds, also communicates with the sac; tissue removed from the tubal wall at this point shows under the microscope undoubted chorionic villi. My explanation of the presence of the blood-clot and the absence of any trace of a foetus is that hemorrhage took place into the sac perhaps as early as the fourth week and the increase of the tumor to its proportions at the time of the operation, (corresponding to the growing sac at the end of three months), together with the frequent attacks of pain, were directly due to the gradual increment of blood after the death of the foetus.

I showed a similar specimen of unruptured apoplectic sac at a meeting of this society about a year ago.

Sutton has pointed out the danger of treating these cases expectantly, and the most conservative must admit that the results of electrical treatment must be not only doubtful, since we can hardly recognize the conditions clinically, but even dangerous. In fact, the question may be fairly raised: "May not hemorrhage into the sac and ultimate rupture follow the death of the foetus?"

Dr. MALCOLM MCLEAN exhibited a membranous cast of the uterus, from a case of membranous dysmenorrhœa.

Growth of Fibroid Tumors After Removal of the Uterine Appendages.

Dr. H. T. HANKS presented such a specimen:

The specimen which I show is the uterus containing a large, sessile, intra-uterine, fibroid tumor. It will be of interest to all of us, when I report that five years ago the patient was suffering from a large fibro-cystic tumor, which was removed by Dr. Lusk at Bellevue Hospital. The uterus being somewhat large at that time, both tubes and ovaries were removed. The patient recovered from the operation, but a fœcal fistula, at the point of drainage, continued for about one year. When the patient was first seen by me there was a small ventral hernia in the line of the cicatrix.

I append the report of the house surgeon at the Woman's Hospital:

Mrs. H., admitted to the Woman's Hospital February 17th, 1893, aged forty. Married sixteen years. Duration of illness sixteen years. First menstrual flow at about the age of sixteen years. Now irregular, flows almost constantly. Duration of flow eight to thirty days. Quantity excessive. Sometimes clotting. Sometimes has no pain during flow. When present it begins about the second day in lower part of the abdomen and is chiefly bearing-down in character. Has had no children. One abortion fifteen years ago at three months; afterward had pelvic cellulitis and dates her trouble from that time.

Both ovaries and a fibro-cystic tumor were removed by Dr. Lusk, at Bellevue in April, 1888. Some peritonitis followed and a fœcal fistula which discharged for a year or more. She now complains chiefly of pain across the lower part of the abdomen, more or less continuous flowing, excessive nervousness, and has had much headache until recently; appetite fair; sleep poor; bowels regular, but movements attended with considerable pain.

February 20th the patient was seen by Dr. Hanks who noted that there was a slight hernia at the seat of the former abdominal drainage tube; that the uterus was asymmetrically enlarged and lying against the anterior abdominal wall near the pubis. He advised curetting, with hysterectomy later, if symptoms did not abate.

February 24th, examination under ether, uterus found to be much enlarged, sound passed five inches, sessile fibroid on anterior wall near left horn, or possibly carcinoma. The uterus was curetted and packed with iodoform-gauze. Very few fungosities were found. The gauze was allowed to remain for two days, when it was withdrawn.

March 8th Dr. Hanks, assisted by Dr. Coe and the house-staff, made an abdominal incision from the pubis to the umbilicus, just to the side of the old cicatrix. The omentum was found to be adherent to the abdominal wall and to the uterus. Three or four loops of intestines were also adherent to the omentum and to the uterus. The anterior wall of the uterus was firmly adherent to the abdominal wall. After tying and separating these adhesions, the broad ligament was seized and held firmly by a strong, broad ligament-forceps, as near to the uterus as possible, the jaws extending fully two inches and a half downwards, and a strong silk ligature was passed through the broad ligament near the distal end of the forceps, and tied fully one inch from the proximal end of the jaws. The tissues between the ligature and the forceps were then severed. The same procedure on the other side. This leaving the uterus somewhat free, the usual incision to dissect the bladder from the anterior wall of the uterus, was made, while the sound was in the bladder. A similar incision was made on the posterior wall, a few inches above Douglas' pouch. With Dr. Holder's fingers in the vagina, the uterine arteries were easily located, through the bottom of the slit in the broad ligament near the cervix, and were firmly tied. The whole uterus was then quickly dissected out from its remaining attachments. The abdominal cavity was then thoroughly irrigated with sterilized hot water. The slit in the vagina was sewed up with loosely-tied continuous cat-gut sutures. The peritoneum which had been dissected back from the anterior and posterior walls of the cervix and uterus was now closed by continuous tightly-drawn cat-gut sutures. The abdominal incision was closed in the usual manner, after having dissected out all of the old cicatrix. Special attention was paid to bringing the fascia in exact apposition, by means of interrupted cat-gut sutures. The patient was put to bed in good condition. For the first few days there was some rise of temperature ranging from 100° to 102.3°, the pulse ranging from 96° to 120°.

On the day following the operation there was a small discharge of blood from the vagina. On the third day there was more discharge of blood from the vagina, and following an enema a free movement of the bowels. The discharge from the vagina continued until the sixth day,

and barring a slight attack of diarrhoea the patient made an uneventful recovery.

The stitches were removed on the twelfth day, leaving a strong and perfect line of union.

It may be of interest to theorize on the cause of the increase of growth of the tumor, and the constant hemorrhage for the past two years, after the tubes and ovaries were removed. It is possible that the attachments to the abdominal wall, the omentum and the intestines, furnished an additional blood supply, which was possibly quite equivalent to that from the tubes and ovaries under normal conditions. Independent of this explanation the fact remains that fully five per cent. of fibroid tumors continue to grow after the removal of the tubes and ovaries.

Dr. H. C. COE said that not only did the hemorrhage persist after the removal of the appendages but sometimes even after the menopause. He had seen a number of cases which, although they had passed the menopause several years, still suffered so much from hemorrhage that malignant disease was suspected, but a careful examination showed only a fibroma.

Dr. A. F. CURRIER said that much yet remained to be learned of the life-history of fibroid tumors. Until very recently nothing at all was known concerning their rate of growth; within the last few months the subject had been elaborated by Kleinwächter, who stated that he found only two references to this subject in all medical literature, namely, the work of Gusseron, and that of Scholler. He asserted that these tumors often do not cease to grow at the menopause, and the case just presented showed that growth might also continue after the removal of the appendages. We were just beginning to learn that fibroid tumors were not as benign as formerly considered; not only might they continue to grow and cause hemorrhage, but they might also undergo malignant degeneration. Martin had reported cases in which such malignant degeneration occurred, and Kleinwächter also had reported a case in a woman seventy years of age who had a fibroid tumor many years, which eventually underwent carcinomatous degeneration. Therefore with the diminution in the risk of removing the entire uterus, which is now obtained by the method in vogue with a number of the members of the Society, the radical treatment for fibroid tumors with hysterectomy would, he believed, ere long be considered the proper treatment in the majority of cases.

Dr. A. P. DUDLEY recalled a case in which he had at first performed

Hegar's operation, but as this only aggravated the hemorrhage instead of checking it, one year later he was compelled to do a hysterectomy, necessarily under much more difficult circumstances owing to the formation of adhesions; hence, he thought, if laparotomy were indicated it were better to do a hysterectomy at once.

Dr. G. M. EDEBOHLS presented three uteri removed by operation, the indication and the method in each case being different.

Case I. Fibrosarcoma of Vagina and Left Broad Ligament. Perineotomy and Celiotomy. Removal of Tumor, Uterus and Appendages, and entire Left Broad Ligament. Recovery.

R. S., aged thirty-six, married, the mother of six children, the youngest being five years of age, was admitted to St. Francis Hospital, October 31, 1892. For four years past has suffered much from backache and pains in lower abdomen, constipation, cardiac palpitation, dyspnoea and general weakness. Her periods are regular, the flow appearing every four weeks and lasting two to three days.

She presents a wide diastasis of the recti abdominis allowing the escape of the intestines beneath the skin and superficial fat. The tubes and ovaries are normal in size, non-sensitive on pressure and prolapsed backward with the retroverted fundus uteri. Uterus is normal in size, retroverted in second degree and can be readily replaced by bimanual manipulation. Cervix lacerated bilaterally, considerably hypertrophied, with an unhealthy look of the granulations and nodules thickly covering the lips of the lacerations. One of these nodules was excised and sent to Dr. J. W. Brannan, pathologist of the hospital, who, after examination, reported it as simple hyperplasia of the cervix.

On November 8, 1892, curettage of the uterus, amputation of the cervix and shortening of the round ligaments were performed at one sitting.

On December 15 patient was ready to leave the hospital, when on examination previous to discharge a suspicious nodule, *not found at the last vaginal examination, ten days previously*, was discovered. This nodule measured a little over a centimeter in diameter and was situated high up in the left half of the retro-vaginal septum at the base of the broad ligament. It involved the posterior vaginal wall, through which it had just begun to ulcerate. The rectum was still freely movable over the posterior aspect of the nodule. From the upper end of the nodule a cord-like thickening could be felt extending

upward and outward into the left broad ligament to beyond a where it could be traced by the fingers.

The clinical features were so evidently those of a malignant neoplasm that extirpation of the growth was immediately determined upon. On the assumption that the growth was probably secondary malignant changes in the uterus, a supposition sustained by the appearance of the cervix before amputation, it was resolved to remove the uterus also.

The operation was performed on the following day, December 1892, and was commenced as a perineotomy. A liberal elliptical incision, with its concavity forward, was carried across the perineum from one tuber ischii to the other between the anal and vaginal orifices. This incision was deepened and the rectum separated from the vagina until the nodule was reached. The nodule was first carefully dissected from the rectum, and then cut away with a border of healthy vaginal wall, two centimeters wide all around, attached.

The induration extending from the upper border of the nodule next followed outward and upward in the broad ligament and removed with a good bit of the peritoneum as far as sight and touch would permit, the work being all the time in dangerous proximity to the left ureter.

A section of the removed nodule was made at this juncture and the malignant character of the neoplasm established beyond doubt.

It was next attempted to retrovert the uterus and to bring it through the large opening in the peritoneum by hooking two fingers under the fundus from behind. The recently shortened round ligaments, however, held the uterus so well forward as to render this manoeuvre impossible of execution. Dr. Edebohls felt confident that but for the shortened round ligaments it would have been a very easy matter to remove the uterus through the peritoneal and the perineal wounds.

The insertion of the round ligaments into the cornua of the uterus might, although with great difficulty, have been cut from below and the uterus thus liberated. The necessity of further removal than could be accomplished from below, and the infiltration in the left broad ligament indicated *cœliotomy*. The abdomen was therefore opened by a 4-centimeter median incision above the pubes and in the Trendelenburg position the entire uterus with both tubes and ovaries were removed in one piece. The left broad ligament was now carefully dissected out entire, clean out to the pelvic wall, leaving none of its contents but the ureter which on inspection and palpation seemed perfectly normal.

It was found impossible to cover the large gap in the bottom of the pelvis with peritoneum. The extensive raw surfaces were therefore packed with iodoform-gauze, the ends of the strips being led into the vagina, and the abdominal incision was completely closed.

The patient was again placed in the dorsal position, the gauze packing of the pelvis adjusted from below so as to drain through the vagina, and the perineal wound accurately closed by numerous interrupted sutures of silkworm gut. The separated vagina and rectum were simply placed in apposition, and what was left of the vaginal tube was allowed to take care of itself. The operation lasted nearly two hours, the time being fairly evenly divided between the *coeliotomy* and the *perineotomy*.

Very great shock, lasting for two days, and a mild attack of acute catarrhal pneumonia, beginning on the third and ending on the eighth day, followed the operation. With these exceptions patient made a good and rapid recovery and was out of bed at the end of two weeks.

The gauze packing was renewed four times during the first week and then discontinued. Both the *coeliotomy* and the *perineotomy* wounds healed by primary union.

Patient left hospital on January 5, 1893, twenty days after operation, very anæmic in appearance with the wound in vaginal vault well closed, but an inflammatory induration about six centimeters in diameter still occupying the region of the removed left broad ligament.

As presented to the Society this evening, over three months after operation, she is the picture of health, and no induration of any kind can be palpated in the pelvis. The *perineotomy* scar is scarcely recognizable. Since leaving hospital patient has been doing all the heavy work of a large family.

The removed specimens were carefully examined by Drs. Brannan and Freeman, and the tumor pronounced a fibro-sarcoma. Sections of the uterus in all directions failed to reveal any evidences of malignancy. Unfortunately the cervix, removed by amputation five weeks previously, and which was most open to suspicion, had been thrown away.

Nearly all that has been published concerning the operation of *perineotomy* saw the light of day in 1889. Before and since that year the literature of the subject has been so meagre as to amount to practically nothing.

Perineotomy was proposed by Otto Zuckerkandl (*Wiener med. Presse*, 1889, No. 7.) for extirpation of the rectum, exposure of the prostate and total extirpation of the uterus. The advantages he

claimed for the operation were control, by the eye, of the parametria, the posterior vaginal wall, the rectum, and the relation of the ureters to malignant, chiefly carcinomatous, infiltrations.

At the third annual meeting of the German Gynæcological Society, in 1889, Wiedow related some cases of pelvic abscess approached and opened by perineotomy. Frommel reported upon the method, citing several cases of total extirpation of the uterus by perineotomy. He preceded the operation, differing from Zuckerkandl, by first circumcising the cervix and separating the bladder in the manner usual in vaginal hysterectomy. Saenger related a case of dermoid cyst of the cavum subperitoneale pelvis removed by perineotomy, and alluded to a previous case of Mickulicz-Trzebicky in which a cyst was also removed by way of the perineum. In the discussion Hegar claimed priority both as to proposal and execution of total extirpation of the uterus by way of the ischio-rectal cavity. He claimed for the procedure the advantage of being able to see what you are doing.

The incisions made by different operators varied. Zuckerkandl recommended a curved transverse incision with the concavity backward. Frommel adopted this incision. Saenger's incision was sagittal instead of transverse, extending from the right labium majus directly backward to two centimeters behind the anus.

Dr. Edebohls had employed the curved transverse incision with the concavity forwards. The posterior vaginal wall, the rectum, the parametria with the ureter, and Douglas' sac were all exposed to the eye in a most satisfactory manner, never to be obtained in an ordinary vaginal hysterectomy. He was favorably impressed with the operation on this his first trial and in a suitable case would employ it again.

He had related the case somewhat at length, because, as far as his knowledge went, it was the first reported case of perineotomy in this country.

Dr. EDEBOHLS also reported a case of

Case II.—Carcinoma of Uterus, Vagina and Sacral Glands. Sacral Hysterectomy. Death on the Fifteenth Day.

P. R., forty-three, widow. Mother of four children, the last born in 1876; no miscarriages. Menstruation began at seventeen and has been regular, the patient flowing three to four days every four weeks, until about three months ago. Since then a typical metrorrhagia, not

severe, offensive vaginal discharges, pains in back and abdomen and loss of flesh.

Admitted February 16, 1893. Patient pronouncedly cachectic. Tubes and ovaries cannot be distinctly palpated, owing to condition of cervix and parametria, but do not seem to be enlarged. Corpus uteri about normal in size and position, but very hard. Cervix very much enlarged and hollowed out into form of a large crater with mouth downward. Walls of the crater composed of carcinomatous tissue running up on all sides to vaginal junction and posteriorly involving the vaginal wall itself. Rectum unaffected and freely movable over involved part of vagina. Slight thickening of parametria adjacent to vagina on left side. No thickening on right. Two sacral glands, enlarged to an average diameter of nearly two centimeters can be plainly felt behind rectum. Mobility of uterus very limited, scarcely two centimeters in downward direction.

The immobility of the uterus, the infiltration of the left parametrium, but especially *the secondary involvement of the sacral glands* put vaginal or coelio-vaginal hysterectomy out of the question. Nothing but a sacral hysterectomy could meet the indications. This was offered the patient with the proper explanations, accepted, and performed on the day following admission.

With the patient etherized and in the Sims position, a slightly curved incision about twenty centimeters long, with its convexity to the right was made from the posterior inferior spine of the ilium over the spines of the sacral vertebræ and coccyx to within two centimeters of posterior anal margin. Removal of coccyx and a transverse strip, one centimeter wide, of lower end of sacrum. Division of prevertebral fascia. Removal of two large carcinomatous sacral glands. Separation of rectum from posterior vaginal wall and retraction of rectum to left. A small hole torn into rectum between anus and peritoneal reflection was immediately closed by running catgut suture. Tedious and difficult search for Douglas' sac, consuming some twenty minutes. Opening of peritoneum and enlargement of opening to right. Uterine body normal in size and not adherent. Small cyst of the right ovary ruptured in the attempt to deliver. Both tubes inflamed, thickened, with occluded ostium abdominale and adherent, with the ovaries, to adjacent parts and organs. These adhesions rendered retroversion and delivery of the uterus and appendages very difficult. Arduous ligation with catgut of both broad ligaments, beginning at infundibulo-pelvic ligament and ending at vaginal vault. Difficult separation of

uterus from bladder. Peritoneum now closed by running catgut, the work thus far having been entirely in clean tissues. Amputation of vagina two centimeters below neoplasia. Removal of uterus and amputated part of vagina. Some incision of bladder wall by neoplasm. Upper end of vagina left open. Wound closed except for about eight centimeters near middle. Wound packed with iodoform-gauze. Two rubber drainage tubes passed through wound and vagina, emerging behind and at vulva. Operation required two hours and thirty-five minutes, the longest Dr. Edebohls had ever spent over any operation whatsoever. Patient pulse 140 at finish. Slow reaction.

On the third day after operation a catarrhal pneumonia of the middle portions of right lung posteriorly was made out. Temperature due thereto running as high as $103\frac{1}{2}^{\circ}$ and persisting six days. For the last six days of life no elevation of temperature.

The pulse between operation and death varied between 140, and was at no time of any encouraging strength.

Dressings changed on day following operation, when a small area of gangrene of skin over sacrum was noticed. This gangrene spread, it involved an area seven to eight centimeters in diameter on the right side of the incision and extended into incision and wound cavity.

The cavity was twice daily douched with sublimate 1-2000, and tamponed with gauze.

On the eighth day the sutures were removed. The wound was wide, its lips being gangrenous. This same dry gangrene also involved the entire surface of the wound cavity with a withered dead pellicle, which began to be cast off only on the tenth day.

Patient died of exhaustion and mild septicæmia on the tenth day after operation. No peritonitis.

Dr. Edebohls confessed that he had no special liking for either hysterectomy or sacral proctectomy. They constitute, especially the former, the most difficult, formidable and trying operations in the range of gynæcological surgery. If it were not for the fact that hysterectomy offers at least a hope of cure in some cases of cancer advanced beyond all possible radical extirpation by either vaginal or cœlio-vaginal hysterectomy, he would feel disposed to omit it altogether. As long however, as the removal of all neoplasia, so surely fatal as cancer, is anatomically possible, it is the duty of the surgeon to attempt it, if the patient so elect after a fair consideration of the case to her, incongenial though the operation be to the

In the case reported the carcinomatous sacral glands could be removed in no other way than by the sacral method. This particular indication for sacral hysterectomy has not been sufficiently insisted upon by writers on the subject.

The diseased condition and the universal adhesions of the appendages rendered the operation in this instance so very difficult.

As regards the technique of sacral hysterectomy we have a large variety of preliminary incisions from which to select: Kraske's, Hegar's, Hochenegg's, the parasacral incisions, left and right respectively of Emil Zuckerkandl and Wœlfel, Rydygier's, Herzfeld's, etc., etc. In this instance Dr. Edebohls followed Herzfeld's method.

The main object, always to be borne in mind, is to do all the intraperitoneal work and to close the peritoneum securely by suture before beginning to deal with the neoplasm itself. The dirty work in infected tissues can thus all be done extraperitoneally, and the risk of septic peritonitis is minimized.

He also presented a patient from whom he had removed the uterus for prolapsus.

Case III. Complete Prolapsus of Uterus and Vagina. Total Inversion of Cervix, Vaginal Hysterectomy. Lateral Colporrhaphy and Perineorrhaphy at One Sitting. Cure.

M. C., aged sixty-one, married, complains of nothing save a complete prolapsus uteri which occurred suddenly while lifting a heavy basket of clothes four months previously.

On examination the entire uterus and vagina are found outside of the body. A complete inversion of the cervix was associated with the prolapsus, the external os being retracted high upward upon the body so as to roll out and expose the entire interior of cervix, the well-known harbor vitæ appearance of which was beautifully demonstrated, being exaggerated by intense congestion of the mucosa.

On January 27th, 1893, Dr. Edebohls performed vaginal hysterectomy, lateral colporrhaphy and perineorrhaphy in such a manner as to remove *in one piece* both tubes and ovaries, the uterus, both sides of the vagina and the posterior half of the vulva, leaving nothing of the entire genital tract except a strip of vagina anteriorly and posteriorly, and the anterior half of the vulva. The peritoneal cavity was closed by catgut sutures and the raw surfaces of the vaginal tract and the perineum were so closed by sutures as to leave on completion of the operation a vagina 8 centimeters deep by 2.5 centimeters in diameter.

This was the first time that Dr. Edebohls had removed the uterus for prolapsus, preferring as a rule the combination of the necessary plastic operations with ventrofixation of the uterus, all to be done at one sitting. The indications for total extirpation in this case were given by the age of the patient and the unhealthy condition of the uterus, especially the cervix.

Dr. W. M. POLK said that the primary incision used by Dr. Edebohls is the same he had employed in an operation he had done in 1891, where he removed the coccyx and a small piece of the sacrum. He could speak most favorably of the advantages of this operation where the complete Kraske operation is not required. It is a very valuable procedure, and is usually accompanied by very little shock. He was glad to hear of the successful result in the case of complete prolapse, because he thought it very valuable under such circumstances. His own method had given the very best results, which were perfect even after two years.

Dr. J. R. GOFFE wished to add his testimony as to the value of approaching the uterus through the sacral region. He had reported one case to the Society last Fall, and he had found the operation very much more simple than he had anticipated. It could be rapidly performed and offered ample facilities for manipulation and examination. In certain cases where the uterus is large, retroverted and adherent, or where there is a suspicion that the disease has extended into the rectum, he believed it was the proper method to pursue. What the remote results may be in cases so far advanced is something about which nothing can of course be said until further experience has been accumulated. He was one of those who had examined the patient upon whom perineotomy was performed, and he wished to say that he considered the result perfectly satisfactory.

Dr. H. J. BOLDT said he wished to enter a protest against Kraske's operation for carcinoma. He did not consider it justifiable in any case of carcinoma of the uterus for the reason that when the disease has advanced to such a stage that we are unable to remove the diseased uterus through the vagina or abdomen, it is not worth while to remove it at all. In his opinion all the cases on which he had seen Kraske's operation performed could have been operated upon just as well through the vagina or the abdomen, or by the two methods combined.

Dr. CURRIER said regarding the last case reported by Dr. Edebohls, that he saw the operation and the patient after she had recovered, and the success of this operation proved that there is a field for hysterectomy

in cases in which the uterus is entirely prolapsed, and even in cases in which the menopause has been passed. But at the same time he thought the operation an extremely complicated one, and one which might well be simplified.

Impacted Gall Stones.—Exploratory incision in intestine.

Dr. W. M. POLK presented this case with the following history :

On the 11th of October, 1890, the patient, who was intensely jaundiced, was admitted to my ward in Bellevue hospital. Her history was that of repeated attacks of biliary colic, with a persistence of the jaundice for nine months past ; this was so severe that even the teeth were stained yellow. Examination of the abdomen failed to reveal any tumor in the region of the gall-bladder, but the liver was somewhat enlarged.

On November the 8th, succeeding her admission to the hospital, the patient under ether, a free incision was made, exposing the gall-bladder. It was about half filled with fluid, but no stones could be felt within it. A stone about as large around as the middle finger was found in the common belt. Its length was apparently about equal to that of the middle phalanx. The gall-bladder was laid open for the purpose of exploration from that direction ; introduction of a sound failed to detect a stone. With the expectation of delivering the stone through the intestinal orifice of the duct, an incision was made into the intestine opposite the duct-opening, and the finger introduced. It was then found that the stone was at least half an inch from the inner surface of the intestine, and there was no dilatation of the intestinal end of the common duct. The opening in the intestine was then closed, and the stone attacked with a large-sized needle, which was thrust through it in many places, the result being to so fracture it that about half of the mass was driven by compression into the intestinal end of the duct. To limit the amount of biliary absorption, the opening in the gall-bladder was left, the bladder simply being attached to the abdominal wall. At the end of a week the opening had almost closed spontaneously ; meanwhile, the patient had steadily improved, and was discharged from the hospital on the 1st of February, feeling perfectly well, and entirely free from every evidence of biliary absorption.

McBurney had been more successful in his attempt to remove a gall stone by opening the intestine, as he had found it sufficiently near the intestinal opening to be seized and removed. The gall duct, in this

case, would have been cut into direct by me but for the number and density of the adhesions which existed in the surrounding area, making it difficult for me to manipulate for the subsequent closure of such an opening. The plan advocated by Mr. Tait was therefore carried out.

Removal of Floating Spleen.

Dr. W. M. POLK also reported this case.

On November 6th, 1891, a patient was admitted to my ward at Bellevue hospital, who, upon examination, was found to have a floating spleen. It occasioned her a great deal of suffering, so that its removal was decided upon.

A free vertical incision was made in front of the anterior border of the quadratus lumborum muscle. The spleen, three times its natural size, was found and removed, its pedicle being quite long enough to furnish an ample stump.

The patient made an uneventful recovery and was discharged three months after the operation, in good health. Microscopic examination of the blood, made thirty-six hours after the removal of the spleen, showed a marked relative increase in the white corpuscles.

Dr. Polk reported this case simply as a matter of record, that it might be associated with a former case of extirpation of the spleen which has already been reported to the Society, and which was done in 1886.

*Death After Abdominal Hysterectomy Due to Intestinal Obstruction
From Paralysis of the Intestine.*

Dr. CLEMENT CLEVELAND presented specimens and reported such a case:

History of Laura K.:

This patient, a German woman, aged forty-nine, was admitted to the New York Cancer Hospital on January 28th, 1893.

She has had four children, the last born thirteen years ago. She has had two miscarriages, the last about fourteen years ago. She has been a widow for thirteen years.

The symptoms from which she is now suffering began, she says, about a year after a fall on the stairs. She received a severe bruise upon the abdomen, which was followed the next day by severe pains, like labor pains, and the passage of a matter that looked like "fish roe." Antedating this, she, however, admits that she has had continuous offensive

discharge tinged with blood probably for about two years, which is the length of time since her change of life. She has had but little real pain, though she has been in a wretched condition of health.

There is nothing of importance or particularly abnormal in her previous menstrual history.

She has lost flesh and strength rapidly during the past six months.

Diagnosis: Examination disclosed a uniformly enlarged uterus, five and one-half inches deep. Probably sloughing interuterine fibroid. In consultation with Dr. Coe hysterectomy decided upon, though it was thought best to see what could be done first by dilatation and curetting. Accordingly on January 27th the patient was etherized. The uterus was thoroughly irrigated with the peroxide of hydrogen as a preliminary step. Quite a large polypoid mass, evidently a portion of the tumor was washed out, which under microscopical examination showed simple adenoma.

Curetting brought away nothing further. The uterus was packed with gauze and patient put to bed.

Operation February 7th. Attempt was first made to separate uterus from bladder and rectum, but the cervix proved to be so soft and attenuated that the procedure was abandoned. The abdomen was then opened by the median incision, five inches long, afterward enlarged to seven. Three silk ligatures were applied on each side and uterus removed with great difficulty. Nothing peculiar to note about operation. Vagina was packed with iodoform-gauze, completely covering strings and raw surfaces. Silkworm was used for abdominal sutures and usual dressing applied.

Patient was put to bed in good condition.

BEDSIDE NOTES.

Jan. 27th, 1893.—Admitted and prepared for operation. Temperature 99.8°, pulse 102.

“ 27th.—No vomiting after operation, 6 P. M. Temperature 99.6°, pulse 78.

“ 28th.—6 A. M. Temperature 100°, pulse 78, respiration 22. No pain, but considerable oozing of blood from vagina. Fluid diet. 6 P. M. Temperature 101.6°, pulse 88.

“ 29th.—6 A. M. temperature 98.4°, pulse 66, respiration 25. Special diet. Milk punch three times a day. Douche three times a day. Epsom salt for constipation. Sleeps well. 6 P. M. Pulse 62, temperature 98°.

- Jan. 30th.—Pulse and temperature normal. On special diet till day of operation.
- Feb. 7th.—Returned from operating room at 5.30 in poor condition. Pulse 156° and weak. Given an enema of whiskey and salt solution. 10 P. M. Temperature 99.8°, respiration 29, pulse 108. Enema of whiskey and salt solution. One hour later, hypodermic of five minims of magendie.
- “ 8th.—6 A. M.—Vomited some since midnight. Temperature 100.2°, pulse 114, respiration 26. Has received an enema of whiskey and salt solution every three hours during the night. 2 P. M. Temperature 99°, respiration 26, pulse 112. Given one dram of whiskey every two hours. One dram of lime water of each one dram every half hour. 6 P. M. Temperature 99.4°, pulse 72, respiration 24. 10 P. M. Hypodermic of Magendie for restlessness and pain. 11 P. M. Temperature 100°, pulse 120, respiration 26, temperature 100°.
- “ 9th.—6 A. M.—Temperature 100.2°, respiration 24, pulse 114. Slept quite well during the night. Took one and one-half ounces of milk during the night. Given iced brandy one dram every hour. Milk and lime water, two drams each every half hour. 10 A. M. Given Epsom salts one dram every half hour (six doses). Vomited after first dose. Temperature 101°, respiration 24, pulse 120. 2 P. M. Temperature 101.6°, pulse 144, respiration 24. Soap-suds enema, no effect. One hour later enema of olive oil and turpentine. One hour later ten grains of calomel one-half hour later given ten minims of Magendie by Dr. Cleveland. 6 P. M. Temperature 101°, pulse 144, respiration 24. Hypodermic of 1-160 of a grain of strychnia. Vomited everything given after eight o'clock. 10 P. M. Temperature 102.8°, respiration 28, pulse 144.
- “ 9th.—10 P. M.—Given a hypodermic of 1-100 of a grain of strophanthin, which was repeated at midnight. From that night on she failed very rapidly. No movement of bowels could be effected. Died at 6.55 A. M., February 10th.

The above case should be considered with the one that follows. The reason for which I will give in concluding.

Dr. CLEVELAND also reported a case of uterine fibroid with laparotomy to be contrasted with his preceding case.

History of Mary A. D.

This patient, a colored woman, thirty-seven years of age, was admitted to the New York Cancer Hospital, January 28th, 1893. She has been married but eight years, though she had a child by her present husband twenty years ago. This child did not live. She has had no abortion or miscarriages.

Her menstrual life began at thirteen, was of the twenty-eight day type, normal in quantity and duration though preceded by a little pain. She says she has never had any indication of womb trouble till the present time. Her present symptoms date back to last November, beginning with sharp pain in the left side, the left pelvic region. This has continued up to the present time. She has had slight discharges of blood ever since the pain began in November, that is, the flow began within two days. This was not her regular period and she then believed herself pregnant, having some of the prominent symptoms, namely "morning sickness" with "pricking" sensations in the breasts. She says the slight bloody discharge has been constant, but that there have been no clots or shreds of membrane.

Diagnosis.

Bi-manual examination disclosed a large solid mass, fully the size of a child's head at term and filling the pelvis. The uterus which could not be distinctly made out was evidently crowded upward out of the pelvis, as the cervix could be felt high up in front, just posterior to the arch of the pubis, and through the abdominal wall and to the right could be felt a quite large irregular globular mass, which was thought probably to be the fundus. A diagnosis of fibroids with possible pregnancy was made. This was concurred in by Drs. Coe, Brettauer and other members of the staff. Exploratory incision advised.

Operation, February 10th, 1893.

Dr. Cleveland operating, assisted by Dr. Brettauer and house staff.

A five inch median incision was first made. As soon as the abdominal cavity was opened a small ovarian cyst with many small multiple cysts massed with it appeared, firmly attached to the mass below. Exploration with the hand then disclosed the uterus high up and to the right, much enlarged, with its fundus studded with fibroids the size of marbles. Under the uterus and entirely covered by the folds of the left broad ligament was a large mass which resembled in feeling a solid fibroid, apparently an intraligamentous fibroid. The right ovary and tube were normal. The incision was then enlarged to seven inches and patient placed in the Trendelenburg posture.

An attempt was then made to enucleate the cyst, which could not be done, and was apparently continuous with the mass below. The cyst was then evacuated, its contents being the ordinary amber-colored ovarian fluid. The cyst was then discovered nearly firmly attached to the large intraligamentous mass but not continuous with it. An aspirating needle was then passed into the solid tumor with negative result. Enucleation of the intraligamentous tumor was then commenced and when nearly completed the finger broke through its walls low down in the pelvis and blood clots protruded, thus giving the first clue as to the true nature of the trouble, namely extra-uterine pregnancy. Enlarging the opening a four-months foetus was extruded.

The final enucleation of the mass was difficult but finally successful. The ovarian cysts were then tied off and the immense cavity packed with gauze, and brought through the lower end of the incision in a solid column two inches in diameter. Fifteen yards of gauze were used in doing this, as was considered necessary, on account of the size of the cavity and the large amount of broken-down tissue, hanging in shreds from all sides. The incision was closed with silkworm gut and the usual dressings applied.

The patient was put to bed in good condition.

BEDSIDE NOTES.

Jan. 10th.—Did not vomit after ether. Slept nearly all night. 10 P.M. Temperature 102° , pulse 120, respiration 32.

“ 11th.—6 A. M. Temperature 101.6° , pulse 122, respiration 26. Catheterized every six hours. During the night she received seven minims of Magendie for pain. Oatmeal water, two drams every half hour. Dressings changed fresh, ones applied. 6 P. M. Temperature 101.6° , pulse 124, respiration 32. Very quiet all day. During the night received five minims of Magendie hypodermatically.

“ 12th.—6 A. M. Temperature 101° , pulse 120, respiration 22. Given milk gruel, half ounce every half hour. Dressings renewed, well saturated. 6 P. M. Temperature 99.8° , pulse 112. Dressings again changed during night. Very quiet but did not sleep much.

Feb. 13th.—6 A. M. Temperature 100.4° , pulse 120, respiration 30. No pain. Given one-tenth grain of calomel every hour and one-fiftieth of strychnine every two hours. 6 P. M. Temperature 100.4° , pulse, 100, respiration 26.

Feb. 14th.—6 A. M. Temperature 99.2°, pulse 112, respiration 20. Given Epsom salts one drachm every hour (8 doses). Dressings changed this morning. Good movement of bowels this afternoon. 6 P. M. Temperature 99.8°, respiration 20, pulse, 104. During the day four ounces of fluid diet were given every two hours. Comfortable day.

“ 15th.—6 A. M. Temperature 100.8°, pulse 110, respiration, 24. Enema of olive oil and soap-suds, good result. Fluid diet. Dressings renewed. 6 P. M. Temperature 102°, pulse 110, respiration 20.

“ 16th.—2.30 A. M. Patient put slightly under chloroform and gauze withdrawn from pelvis and fresh gauze applied. Bowels moved twice during the night. 6 A. M. Temperature 100.8°, pulse 108, respiration 22. Dressings removed and changed at 10 A. M. Given Epsom salts two drachms every hour. Four doses. 6 P. M. Temperature 102°, pulse 108, respiration, 24. Dressings removed and gauze withdrawn from pelvis and cavity irrigated with carbolic solution 1-100. Bowels moved during night.

“ 17th.—6 A. M. Temperature 101.6°, pulse 100, respiration 22. Dressings removed and cavity irrigated with carbolic solution 1-100. 6 P. M. Temperature 102°, pulse 108, respiration 20. Dressings again changed, much diminution in amount of discharge.

“ 18th.—2 P. M. Temperature 101.2°, pulse 116, respiration 28. Stitches removed. 6 P. M. Temperature 99.8°, pulse 110, respiration 24. Dressings again changed. Bowels moved. From this time on temperature remained but slightly above normal for a few days and then dropped to normal.

March 8th.—Sat up half hour. Each day sat up somewhat longer till March 13th when she began to be up and about.

“ 24th.—In good general condition; a sinus still remains leading down into Douglas' Pouch.

There are one or two points in connection with these two cases that I wish to emphasize. They are these: The first case died and died of intestinal obstruction, due to intestinal paralysis. The *post mortem* showed this and nothing else. There was no trace even of peritonitis,

and the rectum was free and patulous, showing no obstruction from free use of gauze.

In this case persistent attempts were made to move the bowels. In the second case, though there were the same indications no attempt was made to produce an action of the bowels, till the serious symptoms began to subside.

This case recovered. I have for some time felt that it is possibly a mistake to attempt to move the bowels with active cathartics, like Epsom salts, on the first or second day, merely because the patient shows signs of distention: that by doing so we increase rather than lessen the danger, by exhausting the muscular power of the intestines. I feel quite positive from the post mortem evidences of the first case that this was true there, and that, if I had followed the course pursued in the second, my patient might have lived.

In regard to the microscopical appearances in the specimens from the uterus of the first case: The specimen that was first examined, before the operation, clearly showed simple adenoma, while the two specimens, one from the wall of the uterus and the other from the large central growth, showed the disease to be true adeno-carcinoma. Guided by the microscopical appearances alone I should have been disposed not to do a hysterectomy, but I was led to do it, however, from the intense suffering and hopeless condition of the patient, and the farther examination of the uterus justified the operation from that point of view.

DISCUSSION.

Dr. JOSEPH BRETTAUER said that the first specimen examined from Dr. Cleveland's case was not removed by curetting but came away during irrigation of the uterus. Microscopical examination showed it to be a pure adenoma. A piece of the uterine wall and a piece of the tumor were examined after the operation and the examination showed the case to be pure carcinoma. No adenomatous tissue was found at the place examined. The first piece was apparently a necrotic polypus and had nothing whatever to do with the malignant tumor.

Dr. COE said regarding the routine use of laxatives after laparotomy, that Dr. E. Boise of Grand Rapids, Mich., had recently suggested the theory that in such cases the death was really due to shock communicating through the splanchnic nerves, and he thought therefore it was better to give the patient a hypodermic injection of morphia and afterwards to make use of laxatives.

Dr. A. H. BUCKMASTER said that he had seen several cases in which death was materially hastened in his opinion by the excessive use of salines. The routine practice of administering salines until the bowels move has been carried to an extreme. Free catharsis is an excellent means of avoiding peritonitis, but intestinal paralysis has many symptoms in common with peritonitis; hence we should be on our guard not to confound the two conditions. The cautious administration of morphine, he thought, could do no harm, and, as Dr. Boise quoted by Dr. Coe has already pointed out in the *Journal*¹ of this Society, morphine may be combined with cathartics without lessening their effect.

Dr. J. DUNCAN EMMET said he could not agree with the preceding speaker regarding the use of salines. If they do harm, it is the fault of the person who administers them and not of the salines themselves. He thought the less we resorted to morphine under these circumstances the better; it is rarely called for and when it is indicated unusual caution must be exercised in its administration. Constipation in his opinion was alone a sufficient contra-indication to the use of morphine except under very rare circumstances.

Dr. DUDLEY asked about the condition of the kidneys in the case in which death was thought to be due to saline cathartics. He believed in the proper use of saline cathartics and he did not think they would produce intestinal paralysis. He had records of sixty-seven consecutive abdominal sections without a death and in every case he had used salines, and he attributed his success largely to this fact. He felt that the use of saline cathartics had not caused death in the case reported, but that the fatal termination was due rather to the effect of ether on the kidneys or to some other cause.

Dr. CLEVELAND replied that the urinary examination was negative and the post-mortem examination showed no disease of the kidneys.

The Present Status of Emmet's Operation for Laceration of the Cervix Uteri.

Dr. H. C. COE read a paper on this subject. (See page 463).

DISCUSSION.

Dr. M. McLEAN indorsed fully every word that had been said in this excellent paper. After many years experience with this operation, and after studying it carefully, he felt free to say that he considered it

¹The New York Journal of Gynecology and Obstetrics, February 1893.

one of the most excellent devices for the relief of woman which has ever been given to the profession.

Dr. H. N. VINEBERG thought all agreed with the author as to the indications for the operation and its efficacy in properly selected cases. The author in common with many others, he believed, misused the operation in subinvolution. If a uterus has not become involuted within three months or a year, it is no longer in a condition of subinvolution and other pathological conditions have occurred in it. In true subinvolution he did not think trachelorrhaphy was indicated. For this condition he employed pelvic massage, which very quickly reduced the uterus to its normal size. It is difficult to understand how cases of perimetritis with adhesions are improved by trachelorrhaphy unless they be due to the traction made on the bands of adhesions during the operation. In this way, an adherent ovary or tube might be liberated and the symptoms dependent upon this condition consequently relieved. A proper analysis of the symptoms present in each case would prevent the unnecessary performance of trachelorrhaphy.

Dr. CUSHING, of Boston, (present by invitation,) said that one reason why trachelorrhaphy had not been so generally accepted in Europe as in this country was because Schroeder's operation was generally adopted and was one more generally known. Again, he thought that the cervices which tear much in labor are originally conical, and in bringing them together by Emmet's operation, the cervix is apt to become again conical. Another reason is that foreign observers consider amputation of the cervix a quicker and much better method for metritis than trachelorrhaphy. The operation of trachelorrhaphy has also fallen into disrepute because many operators who only look at the cervix and do not see the disease behind it—the metritis—feel that they are competent to repair a lacerated cervix. He had operated many times upon the cervix and always preceded it by a thorough curetting and irrigation of the uterine cavity, and he had never had any trouble after his cervical operations. This may be the custom among experienced gynecologists, but it is not so among many practitioners who are performing this operation. It is not very rare to find atresia of the cervix after the performance of trachelorrhaphy. Where there is great redundancy of the cervical tissue amputation is the better operation.

Dr. BINGHAM, of Vermont, (present by invitation,) said that he had been very much in favor of trachelorrhaphy from the fact that in the very first case in which he did this operation a complete relief was given to a sciatica of about ten years' duration. In many other cases the operation had given complete relief to all the symptoms.

Dr. BUCKMASTER said that foreigners did not oftener resort to Emmet's operation because they did not know how to do it, and this fact is no reflection on their surgical ability for he doubts if any surgeon has learned the operation properly except from its originator. The fact is that it has been considered a simple operation has stood in the way of its more general adoption. The operation is essentially one of repair, and when properly performed no tissue is removed which forms part of the normal uterus. The operation may be said to consist of two parts. The first step is to entirely remove the scar tissue; the second is the union of the wound which is left. This implies that none of the *normal* cervical canal has been removed, but the sides of the canal should be brought together, by proper insertion of sutures, so that the wound is shut off from the cavity of the uterus or the cervix. In some cases this is impossible, and where there is much scar tissue it is always very difficult. He thought very few operators closely followed Emmet's directions in this regard. In very bad cases where it is impossible to bring together the sides of the wound, Emmet himself practices amputation. After closely observing many cases in which the true Emmet operation was done, he was more than ever convinced of its utility.

Dr. H. L. COLLYER said that wherever there is a laceration of the cervix of any extent more than physiological, it should be the object of the surgeon to restore that part as nearly as possible to its normal condition; by doing so, relief is invariably experienced. He had seen many a cervix repaired, with the os formed far to one side, its proper place where it was perfectly evident the operator had taken off portions of the anterior and posterior lips, taking no precaution necessary for a central canal. In some cases where there is great hypertrophy of the lips, it is necessary to remove a large portion of the cervix to insure perfect apposition, and this necessitates the introduction of a plug, to maintain a proper canal. In other cases, one will find that large portions of the cervix have been removed, so that after union, there is so little tissue left about the os, that at the next childbirth the cervix invariably tears; and this results, secondarily, in atrophy of the tissues, so that proper repair of this second laceration is impossible. He thought too speedy a repair of lacerations of the cervix objectionable in many cases of subinvolution; for he had known it to produce superinvolution and atrophy. In those cases associated with pelvic adhesions about the uterus sometimes too great traction on that body has caused an extension of the perimetritis and a worse condition than before established. The success of the operation he thought

chiefly depended on the judgment of the operator and the perfection of the technique, with thorough antisepsis.

Dr. J. DUNCAN EMMET did not know of any operation about which there had been more wild talk than about the operation for laceration of the cervix. The reason that foreigners, Germans and Englishmen particularly, do not appreciate this operation is because they know nothing about it. Five years ago when he made a tour through Germany and Austria and came in contact with a number of distinguished operators of those countries, he found only one who had ever taken the trouble to inquire into the operation and that was Dr. Breisky, then of Prague. Winkel, Martin and Braun knew nothing of the subject; they waited until the patient had epithelioma of the cervix, then they cauterized it. The want of knowledge of the operation in this country is due he thought to the fact that many thought they understood the operation because they had seen Emmet do it, or because they had read a description of it. Personally, he considered the proper performance of this operation one of the most difficult feats in gynecological surgery. He had never seen any one who could do it properly unless he had carefully observed the manner in which the originator of the operation performed it. The whole substance of the paper could be summarized by saying that if the operation were done according to the indications originally laid down by Emmet, it is always successful; but if done according to the fancy of the individual operator it fails. If there be inflammation of the broad ligament or any remains of such an inflammation, such as flexure, or if there be a new growth or any obstacle to the proper circulation of the blood about the uterus, the operation of trachelorrhaphy is contra-indicated. He had never known a case in which a woman was not absolutely cured of all her symptoms when the operation was properly done under proper indications. If men would only take the trouble to see Emmet operate he thought they would never be disappointed. He thought he could speak without prejudice for he had been under other men at the Woman's Hospital who did not hold the same views as Dr. Emmet.

Dr. BRETTAUER thought it was not fair to accuse the Germans of discarding an operation simply because it had been devised by a foreigner. There are too many conscientious men among the German scientists not to secure the adoption of an operation if it were useful. The speaker said he had assisted Prof. Breisky in this operation and had seen Dr. Emmet operate quite often, and he felt sure that Prof. Breisky understood the operation as well as Dr. Emmet. The few cases

upon which he had operated were cured. Personally, he had advised many women not to have trachelorrhaphy done but rather to submit to curetting or some other form of treatment which for some cause or the other seemed to him more advisable. He wished Dr. Coe would state exactly what was meant by the expression "if the cervix is torn to any extent."

Dr. CUSHING said that he knew that Dr. Säger wrote a good article on this subject four or five years ago, and he thought that Martin mentioned the operation and described it in his book. If the operation can only be successfully performed by those who have actually seen Emmet operate, how could foreigners be expected to know how to do the operation properly?

Dr. DUDLEY believed that Emmet's operation of tracheiorrhaphy had just as good a standing now as it ever had. Abuses of various kinds had crept in, that is to say, minor work had been neglected in the enthusiasm for the major operation. The preparatory treatment had also very often been neglected. In the course of the preparatory treatment to which Emmet subjects his patients, many of the associated conditions are dissipated. Dr. Emmet had never deviated from the use of silver wire sutures, whereas at the present time, others use cat-gut, silk, silkworm gut, etc. Contrary to his teaching, many even drag the uterus down to the vulva. Moreover very little attention is given to the after-treatment, and the operation is done hastily and not at all according to the original method. The abuses which have crept in are not the fault of the operation but are the fault of those who have not obeyed Emmet's instructions. Another disturbing factor often is the plan of doing combined operations, such as operating on the perineum and on the cervix at the same time.

Dr. COE, in closing the discussion, said that he had nothing further to add, but in answer to the question raised by Dr. Brettauer he would say that the expression quoted is a very unfortunate one and probably accounts for the diversity of opinion which exists. He would avoid the expression altogether.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, April 4, 1893,

GEORGE TUCKER HARRISON, M. D., President, in the Chair.

Symphiseotomy.

Dr. EGBERT H. GRANDIN exhibited two patients upon whom he had performed this operation and read a paper on this subject. (See page 461.)

DISCUSSION.

Dr. BARROWS asked if any effort had been made to bring about apposition of the bone by the introduction of sutures.

Dr. GRANDIN replied that there had been absolutely no such effort made, for in all the reported cases there had been good apposition.

Dr. BARROWS said he was surprised to find how good was the apposition in these cases. In the first case he could not detect any motion at the symphysis when the patient was walking, but in the second case such motion was very evident.

Dr. MALCOLM McLEAN said that he had found in both cases that motion could be detected by crowding the finger well up into the arch of the pubes, and rocking the pelvis from side to side. Although this motion was very evident, the apposition of the bones was excellent. Still, he thought it was violating the ordinary rule of surgery to allow the patient to get up on the twenty-third day and walk. We do not do this in other cases where we desire to secure bony union. In his opinion, the patient should not be allowed to bear the weight of the body upon the lower extremities until four weeks after this operation.

Dr. GRANDIN said that the first patient walked for the first time after the operation on the thirty-fifth day, and the second on the twenty-first day, at which time she walked just about as well as she does now.

Dr. A. M. JACOBUS asked why it would not be better to suture the symphysis with silkworm or catgut sutures with the idea of securing firmer and more rapid union, by keeping the joint immobile.

Dr. GRANDIN replied that in all the recorded cases there had been

close apposition and the formation of fibrous tissue. It took time for this tissue to solidify, but he believed the motion now present in the joint would entirely disappear. As the incision was made largely by the sense of touch, it would be rather difficult to use sutures without laying bare the tissues in front of the symphysis, and cutting the crura of the clitoris, and the vessels in the vicinity. Moreover, he did not think any closer apposition could be obtained with sutures than without them.

Purulent General Peritonitis, probably tubercular. Cæliotomy and thorough drainage. Cure.

Dr. GEORGE M. EDEBOHLS presented a patient upon whom he had operated for purulent general peritonitis four months previously. Patient twenty, single, Russian, domestic, admitted to hospital Nov. 29, 1892. No reliable information could be obtained as to her family history. Patient herself, though delicate, was in fairly good health until about four weeks previous to admission, when she took to bed with severe abdominal pains, fever, vomiting and headache. The vomiting and abdominal pains lasted a full week. The abdomen then began to swell and had progressively increased in size until it reached the volume accompanying a seven or eight months' utero-gestation. Constipation, shortness of breath, night sweats, hectic, loss of appetite and flesh, and great emaciation except in abdominal region were the associated symptoms. During the ten days which she spent on the medical division of the hospital, her evening temperatures generally reached $103\frac{1}{4}^{\circ}\text{F}$, the morning temperatures being somewhat lower, but never quite normal.

Pulmonary examination showed greater or less areas of dullness on percussion and râles of all kinds over various parts of both lungs. The part chiefly involved was the posterior inferior portion of right lung, where complete absence of respiration and great dulness on percussion existed over a considerable surface. The apices were not more diseased than other parts of the lung.

Abdomen symmetrically distended by an accumulation of fluid which fills almost the entire cavity, pushing the intestines upward, backward and outward. Flatness on percussion from pubis to above umbilicus, the area of flatness being somewhat irregular in outline. Distinct fluctuation everywhere. Uterus in normal anteversion and of normal size; appendages cannot be recognized.

Diagnosis:—tubercular peritonitis.

Operation, Dec. 9, 1892, the patient's pulse at the time being 140, and the temperature $103\frac{1}{4}^{\circ}$. Cœliotomy. Peritoneal cavity entered in median line, a little below umbilicus, by a four-centimetre incision. Four litres of moderately thick pus, in which floated numerous shreds of coagulated purulent material of quite large size were evacuated, and the peritoneal cavity was thoroughly washed out, first with a 1-5000 sublimate solution and then with sterilized water. The enormous pus cavity was situated between the uterus below, the intestines above and behind, and the abdominal wall in front. The tubes and ovaries were not especially enlarged, their serous covering merely sharing in the general thickening of the peritoneum. An opening was made from the bottom of Douglas' sac into the vagina and two rubber drainage tubes were drawn through, establishing thorough drainage from surface of abdomen to vagina.

Patient rallied well, considering her extreme debility. The peritoneal cavity was washed out daily for three weeks, when the drainage tubes were withdrawn and the wounds allowed to close. At the end of two weeks after operation temperature and pulse fell to normal and have so remained since. There has been no re-accumulation in the abdomen, in which no abnormality can now be detected by palpation; the abdominal and vaginal incisions have healed firmly, and the patient has gained very much in weight and appearance and is enjoying excellent health. Her cough has entirely disappeared and physical examination of the lungs reveal little or no abnormality.

Although no tubercle bacilli were found in the pus removed from the peritoneal cavity, the clinical evidence leaves but little doubt of the tubercular nature of the affection. The history strikingly illustrates what can sometimes be accomplished by surgery in cases apparently the most desperate.

Dr. EDEBOHLS presented

A Tubercular Omentum

Removed by operation from A. H., a married woman of twenty-five, with an indifferent family history. Patient began to menstruate and was married at sixteen, gave birth to three children and had the same number of miscarriages. Her last menstruation occurred in February, 1891, and while pregnant with her last child she went through an attack of typhoid fever. From the birth of this child, May

5, 1892 until she came under the care of Dr. Edebohls on January 7, 1893, patient had not left her bed. Weakness, abdominal pains and vertigo on attempting to sit up were assigned by the patient as reasons for the bed-ridden eight months.

On admission patient was extremely emaciated and feeble. Practically every muscle of the body was atrophied from disuse and many of the muscles were the seat of painful and irremediable contractions. An immovable, semi-fluctuating, disc-shaped tumor occupied the umbilical region. The length of the tumor was estimated at seventeen to eighteen centimeters, of which about one-third was situated to the right, and two-thirds to the left of the median line. Its width measured fifteen and its thickness was estimated at five centimeters. The liver and spleen and kidneys were found in their proper places. The uterus, of about normal size, was high up out of the true pelvis, its left border being fused with the tumor. The right appendages were made out as a mass some six to seven centimeters in diameter. The left appendages could not be distinguished, being apparently incorporated with the tumor.

The tumor was diagnosticated as a lipoma of the omentum. As there was a history of sepsis following labor the condition was supposed to be due to a chronic peritonitis. The involvement of the appendages in the inflammation and the high fixation of the uterus were thought explicable on the same hypothesis.

On January 13, 1893, curettage of uterus and cœliotomy. During the former operation a shallow excavation with hard fibrous margins (tuberculous ulcer?) was detected by the curette in the left cornu of the uterus.

A fifteen-centimeter median incision, with its centre at the umbilicus, was made in the abdomen. The peritoneal cavity was found with great difficulty, the parietal and visceral peritoneum being everywhere adherent. Profuse hemorrhage. After much laborious separation of adhesions the peritoneal cavity could be explored, and it was found that the entire peritoneum, visceral and parietal, was crowded full of tubercles. Many of these showed the miliary character, but the greater part were in a stage of advanced ulceration and necrosis. The tumor was found to be the tubercular omentum shrivelled up and thickened to the dimensions above indicated. It was dissected from its adhesions, its attachments to the stomach were tied off close along the entire greater curvature of the latter, and the whole omentum was removed. The abdominal cavity was flushed with $\frac{1}{1000}$ sublimate solution and the

wound closed without drainage. Patient bore the severe operation well and rallied without difficulty. The abdominal wound healed by primary union.

Microscopical examination discovered tubercle bacilli, both in the omental tumor and in exsected portions of the peritoneum.

Four weeks after operation an intestinal fistula formed, the transverse colon being perforated by tubercular ulceration and the resulting infection of the adherent abdominal wall leading to perforation of the latter. An unsuccessful attempt to close this fistula was made a month later. The patient had recently left the hospital for her home, to return again in from four or five weeks for a second attempt to close the fistula, should the latter still persist at that time.

Dr. EDEBOHLS also presented a specimen of

Strangulated Ovarian Cystoma Successfully Removed During an Attack of Acute Catarrhal Pneumonia.

The strangulation was due to a torsion of the pedicle of about 180° from right to left, the origin of the tumor being on the right side. The tumor was removed from a religious, aged twenty-seven, who could not say how long it had existed; the sub-acute symptoms of strangulation, however, had existed for three weeks. The tumor filled the abdomen from pubis to above umbilicus and proved to be a monocyct tensely filled with a dark, grumous, bloody fluid, the walls of the cyst itself exhibiting numerous dark spots of all sizes due to extravasations of blood. The tumor had crowded the uterus down into the pelvis and retroverted it in the third degree.

The interest in the case centered in the fact that the various operative procedures in connection with the removal of the tumor were undertaken while an acute catarrhal pneumonia, involving the greater part of the right lung, was in active progress, the temperature at the time of operation being $103\frac{1}{2}^{\circ}$ and the pulse 120. The symptoms due to the strangulation were so urgent, that delay, notwithstanding the unfavorable condition of the lungs, seemed unjustifiable.

Accordingly on January 24, 1893, under ether anæsthesia, the retroverted uterus was first curetted, as a preliminary to the ventrofixation which was to follow the removal of the cyst. The abdomen was then opened, the cyst emptied, freed from its numerous though friable and easily separated adhesions, and removed. Ventrofixation of the uterus completed the operation, the peritoneum being dry-cleaned and the abdomen closed without drainage.

The pneumonia ran on for four days following operation, the highest temperature reached being 104° . From the fifth day on the temperatures were normal and patient made as uneventful a recovery as any other ovariectomy case, the abdominal wound healing by primary union.

Another feature of interest was a pressure paralysis of the entire left upper extremity immediately following operation and due to hanging of the arm during anæsthesia over the side of the table, the edge of which impinged upon the large nervous trunks just below the axilla. The paralysis was complete for two weeks, when gradual return of power began. The faradic current was then used to keep the muscles in condition until the nervous connections should have been re-established. Six weeks after operation the arm was as strong as ever, and the patient left hospital.

Dr. EDEBOHLS related the history of a case of

Acute Sublimate Poisoning resulting from a Single Intra-Uterine Douche.

The patient was a primipara, the wife of a colleague. The labor was tedious and difficult, and the attending physician effected delivery by applying the forceps to the large presenting head. A shallow but long tear of the vagina and perineum occurred, which Dr. Edebohls was called upon to repair seven hours after delivery. In view of the tedious labor and the instrumental delivery he thought it wise to insure the asepsis of the entire genital tract before closing the perineum, so as to forestall the possible necessity of disturbing the wound by later manipulations. With this object he first gently curetted the entire interior of uterine wall with a large dull curette; then washed out the cavity with about a litre of a 1-2000 sublimate solution, free return of the fluid being provided for, and finally closed the vaginal and perineal tear with thirteen interrupted silkworm sutures. Fifteen hours later the first bloody stool occurred, followed by seven more within the next five hours, after which there was no further trouble. The stools presented the appearance characteristic of sublimate poisoning, consisting of nearly equal parts of fluid and semi-coagulated blood and of fine yellowish-brown curds, together with a slight admixture of mucus. There was little or no tenesmus, and no mouth symptoms, the elimination of mercury by the skin, however, was evidenced by a decided tarnishing of her gold wedding-ring. At no time did the patient's

general condition cause anxiety and with the disappearance of the bloody stools, after five hours, she was out of danger. The rest of the puerperium was uneventful.

Dr. EDEBOHLS reported the case to sound a note of warning. In an almost daily use of sublimate solutions within the uterus, extending back over years, he had, previous to this experience, only once encountered evidences of absorption, and in that case a moderate salivation only had resulted. He had, however, never before had occasion to administer an intra-uterine douche so soon—seven hours—after the termination of labor, and in that fact he sought the explanation of the rapid and greedy absorption of the poisonous sublimate. The moral was obvious, and the lesson he learned from the experience was: under similar conditions to use some less active drug like creolin or lysol.

DISCUSSION.

Dr. A. H. BUCKMASTER asked how the diagnosis were made of tubercular ulceration in one cornu of the uterus.

Dr. EDEBOHLS replied that the ulcer was supposed to be tubercular because of its association with a general peritoneal tuberculosis and other clinical signs of this disease.

Dr. BUCKMASTER asked if the patient who had pressure paralysis had been in the Trendelenburg position. He had a patient who had suffered from this trouble and he thought that the paralysis might be explained; for, with the arms above the head, pressure on the nerves of the upper extremity is apt to occur. He was surprised that it should be necessary to sound a note of warning regarding the use of sublimate solution after labor; he thought this practice had been generally abandoned long ago. In view of the fact that we have in our possession such safe antiseptics as lysol and creolin, it is highly improper, in his opinion, to use sublimate solution, except possibly in a very dilute form— $\frac{1}{1000}$ or $\frac{1}{2000}$.

Dr. EDEBOHLS, in closing the discussion, said that when the patient is flat on the back the tension of the arms extended above the head on the flat surface, as is the case on most operating tables, is greater than with the patient in the Trendelenburg position. In his case, however, the paralysis followed from the arm being allowed to hang over the edge of the table. He had also noticed a similar result from the arm being over the head, and sometimes from an assistant making pressure on the arm. In connection with the case of tubercular peritonitis which he reported, he asked what was the best manner for

curing a fistula extending from the transverse colon to the skin, and occurring in a patient suffering from a tubercular peritonitis with universal adhesions. All the intestines were agglutinated so that the ordinary resection was out of the question. He had hoped that by stopping the irritating discharge for a short time the wound would be healed by granulation, and accordingly he had inserted deep sutures, bringing the fascia together, and tied them. After seven days the fascia sloughed away on account of the tension of the sutures. The speaker said that his patient did well for four or five weeks after the primary union of the wound; then there was probably a perforation of a tubercular ulcer and consequent infection of the wound and the formation of this fistula.

The PRESIDENT said that in a case of extensive tubercular ulceration of the skin which had resisted all the ordinary methods of treatment he found that euophen healed it with surprising promptness.

A Study of a Case of Placentitis.

Dr. R. G. WIENER read a paper on this subject. (See page 595.)

DISCUSSION.

Dr. MALCOLM McLEAN recalled a case many years ago in which there was a history of the patient having lost seven children between the sixth and seventh month, and he tried in vain to obtain a history of syphilis from the parents, who were people in the higher walks of life. When they came under his care both parents were put on anti-syphilitic treatment, and within a year the woman had a living child. This is suggestive in connection with what was said in the paper.

Dr. A. F. CURRIER referred to a case which he had attended only two months ago. The patient was the wife of a physician and three years ago was delivered of a perfectly healthy child. The second child was born dead at the eighth month. When he first saw her, at the seventh month of her third pregnancy, her urine was almost solid with albumin. She was then put to bed and had one decided convulsion. The child weighed only about four pounds and had convulsions almost from the time of its birth. A constant stream of oxygen was kept passing over the child, and the temperature of the room maintained at 75° F. The child did well for about five days and then contracted pneumonia and died. In this case two-thirds of the area of the placenta was in the fibro-fatty condition referred to in the paper. He

thought it was not possible at present to make a diagnosis of this condition.

Dr. JEWETT said it was not uncommon to encounter cases of syphilis in which this disease could not be demonstrated except by the results of anti-syphilitic treatment, a method of diagnosis which is well recognized as justifiable.

The PRESIDENT said that the neglect to carefully define the terms we employ is often the cause of inaccuracies in clinical histories. For example, in connection with a case of a child with a large liver and spleen and a fatty placenta, he made some inquiries as to the family history; when the father was asked if he had syphilis, he replied, "No, sir, I have never had syphilis;" but further questioning elicited the fact that he had had "the pox" four years previously.

Dr. WIENER, in closing the discussion, said that he had simply presented the case on account of its interesting features. It had been absolutely impossible to get any evidence of syphilis in his case, yet he had but little doubt of its being an important factor in the case.

TRANSACTIONS OF THE NEW YORK ACADEMY OF MEDICINE.

November 3d, 1892.

DISCUSSION on Dr. W. Gill Wylie's paper, entitled:

*Abnormal Conditions of Organs and Tissues Contained within the
Abdominal Cavity Which Simulate and May Be Mistaken
for Diseases of the Uterus and its Appendages.*

Dr. MUNDÉ: I am very much pleased to learn that there is one gynæcologist besides myself—and a gynæcologist so radical as Dr. Wylie—who admits that a woman has other organs which are subject to become diseased besides her uterus, ovaries, tubes and pelvic peritoneum. He does not admit that she has a pelvic cellular tissue. In that I do not agree with him. But Dr. Wylie begins his paper by reminding us of a number of very radical innovations which he brought before the profession years ago, many of which, I am proud to say, I have accepted, and for which I give him due credit, and which I did not think at one time I should accept. But some of these innovations

I do not think I quite agree with, and I do not accept them, and I do not think, perhaps, that they were original with Dr. Wylie—I do not know that he claims so. But as far as his paper of this evening is concerned, I must say that I agree with him in every word that he has said. I was very glad to hear him bring up before a general audience the fact that there is a great deal too much tendency for general practitioners, also for specialists, particularly among the operative class of gynecologists, to forget that a woman has other organs besides her pelvic organs. There is a good deal too much tendency to attribute every abdominal pain, every pelvic pain, every pain anywhere else too, that the woman has, entirely and exclusively to her sexual organs.

Dr. Wylie has reported or referred to a number of diseases which may simulate diseases of the sexual organs. If you will allow me, I will briefly—not recapitulate what he has said, so much as to state what I myself have seen of these conditions.

To begin with the rectum. I have frequently seen cases that have come to me for what was supposed to be pelvic or disease of the sexual organs; also a burning sensation, supposed to be in the vagina, which I found to be due to a chronic proctitis; bearing down sensations, generally supposed to come from the vagina, but found to be from the rectum; bearing down sensations, due to hemorrhoids, internal and external, and chronic rectal catarrh. Pains also referred to a pressure of the uterus on the bladder—prolapsed uterus—found to be due to cystitis. Pain in the lower part of the sacrum or coccyx found to be due to a dislocated coccyx, an inflamed coccyx, also often a rectal catarrh. I find rectal catarrh to be so common in women that I always look for it and often expect to find it when they complain of a severe constant pain in the lower part of the back in the sacral region and the coccyx. Further, to go a little above, I find a large number of women every year who consult me for a pain in the lower part of the abdomen, one side or the other, generally across the abdomen below the umbilicus, from one side to the other, and when I examine them carefully bimanually I find no disease of the sexual organs and tubes perfectly normal; and on a careful investigation of the case I find that they have been constipated for years, that they have been constantly taking laxatives—drastic cathartics usually; that their passages are never normal; that they have alternate diarrhoea and constipation; that when they have a passage at all the passage is a small hard mass, not a normal passage. They will also state that they have passages of mucus, slimy, sometimes mixed with blood. I should have men-

tioned the laceration of the rectum as a not at all infrequent disease simulating disease of the sexual organs. To be brief, then, a chronic colitis is a common cause of the pain which women consult gynæcologists for, and not a disease of the ovaries, tubes, or sexual organs at all. Further, you will find a dilated stomach at times, so much dilated that by the percussion sound you will find it to extend below the umbilicus on the left side. In these conditions of pain, the patient being a woman, everything is referred to her ovaries, tubes and uterus.

Take the kidneys. We have all of us seen many cases of displaced kidneys. I think perhaps this subject may be a little exaggerated at times, I think we may attribute a little too much to that. I know that I am open to criticism—the gentleman I am looking at perhaps thinks I am criticising him, but I do not mean that exactly—I am looking at it from my standpoint. We may say the kidneys, when we will find the ureters to be at fault. I have in mind a case which was treated for a long time in the benighted region of Harlem for chronic oöphoritis, in which a stone worked its way gradually down from the kidney through the ureter. It was a case of calculus with ureteritis. That was all there was to it. There was nothing the matter with the ovaries at all. I saw a case with the same trouble on the other side. It was a case of calculus, with uterine trouble from the irritation of the calculus and a gravel discharge.

We may have a displaced liver. The liver may get out of place and wander down through the abdomen. Fortunately the livers of this country do not wander very much, so we do not find so many of them. Still, it may occasionally occur and may be mistaken for an ovarian tumor, possibly, if it has gotten down low enough.

Then I was rather surprised to see that the author of the paper did not refer to some of the peculiar tumors that occur in the abdomen, that are not uterine tumors and that may be mistaken for them. One of the most misleading and common at times is the accumulation of fæcal matter, impacted fæces, in the large intestine. I will never forget a case that came under my observation when I was at a hospital in Wurzburg, Bavaria, where the learned Professor Bamberger demonstrated to us a woman who was slowly dying from a large ovarian tumor. Those were the days when ovarian tumor patients were allowed to die unoperated upon; it seems strange that I can remember back so far, but it is true, nevertheless. This woman was slowly allowed to die from a large ovarian tumor. She did die of emaciation and innutrition, and when the post-mortem was held it was a case of

impacted fæces. The channel ran through it, and there was about twenty pounds of fæcal matter impacted in her large intestine. It was an outrage. But I will not be too severe, for it was only five or six years ago that I was called in consultation once to make a diagnosis of two tumors in a lady's abdomen. I was less pleased with my acute-ness when the doctor met me some months afterwards and said:—"I cleared that lady's bowels out, and the tumors disappeared." I had asked him the question before, and I supposed her bowels had been cleared out, so perhaps I was not so much to blame, but I did make the mistake all the same. It is only within a year that I saw a case—was called in consultation: fæces in the ascending colon. I had seen the lady before and had not detected anything of the kind. She was an old lady. Later I found that the tumor had moved over on to the left side. It was a case of impacted fæcal matter. We thoroughly cleared the bowels out; then her physician removed it by passing his hand up—fortunately it was a small one—through the sigmoid flexure. If it had not moved I might have made the same mistake.

Now, as regards other tumors—the tumor of the liver, for instance. I have seen cases of tumor of the liver, a cyst of the liver, which I would have diagnosed and did diagnose as ovarian cyst, until I examined it under the microscope, when I found liver cells and sent the case down to Dr. Thomas, who verified the diagnosis under the microscope of the liver cells. I aspirated it. The patient returned to her home in Port Jervis, where she was operated on and died. She ought to have been left alone, or, at any rate, should not have been operated on at Port Jervis. Another case which I saw in my office I diagnosed as ovarian cyst. Shortly afterwards it passed out of my hands and went to the hospital, where she was operated on and found to be a case of cyst of the colon. She died. Those are mistakes that will occur to any of us. I made a diagnosis of a cyst—finding two cysts of the ovary. They were poly-cysts—one in the pelvic cavity and one in the abdominal cavity. One had pressed the other up, making them feel like one. When I opened the abdomen I found I was mistaken.

I believe that a differential diagnosis between appendicitis and pelvic abscess is not always very easy, either. I believe in pelvic abscesses. I saw a case to-day where there is an abscess that rests on the side of the cervix, and if it is not in the pelvic cavity I don't know where it is. It is due to a puerperal condition. But that they do occur I am as sure of as that I am standing here. I saw a case some years

ago where an abscess opened, or, rather, it did not open—I opened it, aspirated it—in a median line between the umbilicus and the tubes. I took it to be a case of pelvic cellulitis. It was a case of appendicitis. I saw a case in a young girl of thirteen, where the appendicitis had worked its way in the vagina and pushed its way along the side of the cervix, where I opened it, and I found an abscess extending all the way up to the ilio-psoas on the left side to the crest of the ilium. It was important to me as a gynæcological case.

Another form of disease the speaker has not mentioned, and that is abdominal peritonitis. We have all of us operated on a number of those cases, but it is exceedingly difficult to make a differential diagnosis of abdominal peritonitis and an enlarged abdominal assimilation of a tumor, and nothing short of an incision of the peritoneum and intestines will make the diagnosis at all certain. Of course you can guess at it.

The speaker deserves a great deal of credit for being so open as to come out and admit that there is something besides gynæcology, even for a gynæcologist.

I do not agree with him about displacements. I do not think anterior displacements amount to anything—never mind Thomas and Mundé; I kept in a great deal there that I would have left out if I had written the book myself. I had to keep it. And posterior displacements do not amount to anything either. It is not the displacement; it is the complication with endometritis; the enlargement of the uterus, possibly adhesions, and not that, always, either. And still I am always meeting cases where the uterus must be laparotomied out, when there are symptoms that warrant it. A mere displacement does not amount to anything; it is the complications that produce the indications for treatment.

Dr. BOLDT: I think that Dr. Mundé and Dr. Wylie are both a little in error in thinking that gynæcologists start with the theory that only the uterus and appendages are to be considered by them. I think that at the present time not only the gynæcologist but every practitioner of medicine knows that there is something besides the uterus and its appendages. I was a little surprised that Dr. Mundé made the remark that such was the accepted idea and I was under the impression also when I came here that the paper was to deal thoroughly with intra-abdominal diseases simulating diseases of the uterus and appendages. That is a subject, of course, which is of the greatest importance to us, and of that class of conditions which simulate diseases

of the pelvic organs undoubtedly the kidney does stand first. But why such a great deal of stress is laid on the right kidney I do not know, because the left kidney, although not as frequently displaced as the right kidney, is very frequently displaced—more often than is admitted. It is a subject to which my attention was called a number of years ago while I made a special subject of abdominal troubles under Brunk, and my attention was at that time called to it by that gentleman who was certainly the best pelvic and abdominal diagnostician that I have ever met, barring all the regular practitioners. I know that a very large proportion of our cases which have been taken for pelvic disease are not pelvic disease, but are due to a mal-position of one of those glands, that is, one or the other of the kidneys, and although the right is more often displaced, the left is quite frequently displaced.

The right kidney, when it is displaced low down, is not only a condition which is apt to cause a number of reflex symptoms, but it is also apt to cause a great deal of pain, especially when the kidney is displaced as low down as into or about the pelvic cavity. Then the pain is almost constant, and the patient is not relieved until she takes a horizontal position when it is, as a rule, most promptly relieved, and the pain is relieved as long as the patient remains abed. The diagnosis is not at all difficult when the kidney is movable to such an extent, and the abdominal walls of the patient are not too thick and too rigid. But when we have a case who has a great deal of fat or adipose tissue, and one of those peculiar subjects who get their muscles in a rigid state the moment they are touched, or a ticklish patient as we may call them, then it is almost an impossibility to make a diagnosis. We must rest our diagnosis very much on the symptoms, corroborating them when the patient is under an anæsthetic. Dr. Wylie has laid especial stress upon that point, I believe, that it is an absolute necessity to put the patient under an anæsthetic in order to make a diagnosis. The diagnosis cannot be differentiated from a pelvic disease, because when we make a bimanual examination of the pelvic organs we will find those organs practically without any greater degree of sensitiveness than we would expect on a thorough bimanual examination.

There is a condition, however, to which Dr. Mundé has called attention, which has been very strongly in my mind, and that is an inflamed condition of the vermiform appendage and its vicinity, an acute appendicitis, or an old condition where the patients have been constipated for a long time, and especially where the patient has been habitually constipated. Those patients complain to such an extent

that it is not at all infrequent, in fact, it is the rule, that a diagnosis is made of pelvic disease, whereas when we make a bimanual examination we find the uterus perfectly mobile; the ovaries are not at all affected and are in perfect position; they are not to be felt except very high up in the pelvis, and they are no more sensitive than we would expect to find any ovary. But when we make the usual examination directly over the sacrum we get the sensitiveness. And those patients complain more or less of constant pain at all times and of being constipated. The conditions of constipation to which both of the gentlemen have called attention are known to us. We are aware that women, when they suffer from chronic constipation have almost all the pains of pelvic disease. One condition to which neither of the gentlemen has called attention, and which I have seen quite a number of times—so often, in fact, that I have made a number of notes about it—is a painful condition of the muscles, and especially when this pain is situated in the region of the pelvis proper, low down in the abdominal muscles, it does simulate pelvic disease to such a degree that one is apt to make a wrong diagnosis and consider that it is pelvic disease. I suppose that has been the case a number of times. I have committed the same error myself. It is a painful condition, sometimes situated in the lower part of the rectal muscles at the point of their intersection, and the pain is increased with pressure, and sometimes the pain is so intense that the moment the muscles are touched they knot up, and pseudo-tumors are formed.

I remember a case I presented to the Obstetrical Society two or three years ago, where it was not a small tumor, but a tumor that resembled a medium-sized ovarian tumor, and it was impossible to get anything out of the patient until she was put under an anæsthetic and the muscles properly relaxed.

Now, in regard to the conditions of the rectum. They have been alluded to and also the conditions of the anal hemorrhoids and fissures. They have been very frequently mistaken for pelvic disease. One important condition to which Dr. Mundé has called attention is the ureters. I am somewhat careful, in any patient brought to me, to palpate the ureters, in my gynæcological cases. And again the same condition is met here that I have mentioned before. In women with thick abdominal walls or rigid abdominal muscles it is difficult to palpate the ureters; while with a woman with thin abdominal walls, and if they are properly relaxed, it is a great source of satisfaction when we can explain to our own satisfaction what the condition is. And very

frequently with vesicle tenesmus the painful condition about the bladder is easily explained when we can palpate the ureters and find them between our fingers considerably thickened and sometimes double their normal size. So for that reason I think it is a matter of importance that we go carefully through the pelvic organs and accustom ourselves to palpating those tubes.

Dr. EDEBOHLS: The ground of the various diseases of the abdominal tissues and organs that simulate diseases of the uterus and appendages has been pretty thoroughly covered this evening by the remarks of the three gentlemen who have preceded me. There is scarcely anything to add in this direction that I can think of just at present, except the fact that not enough stress has been laid upon the condition of the omentum, which is found quite frequently and simulates uterine tumors. It is a condition of the lower end of the omentum and is the result of inflammatory disease of the pelvic peritoneum—generally starting from the tubes on the lower end of the omentum, it becomes adherent to the peritoneum. It gains a fresh supply of blood from this source, which, in addition to the supply from the other, causes a hyper-nutrition of the lower end of the omentum, and as a result of this tumors are formed—tumors which contain cysts. Recently I had occasion to present fatty tumors of the omentum removed from three different patients within the comparatively short period of several months. All of them, as a result of bimanual examination, had simulated exactly uterine fibromentum. Another condition which Dr. Mundé has referred to is a displaced liver—a condition of prolapse of the liver, or the wandering liver, as the Germans call it. I myself have two cases in which this condition of wandering liver, or displaced liver, very much resembles the symptoms produced by uterine diseases. When the liver travels this way and gets out of its place, the mechanism of the process is this: what is the superior surface of the liver becomes the anterior surface; the anterior surface becomes the lower edge. I have in one case found the anterior edge of the liver behind the uterus, the liver itself filling the entire abdomen, and this case was verified by our being able to get the liver back into its place, and having it in its place to palpate the uterus and ovaries and appendages, and we found they were free from disease. In this case I made the diagnosis correctly. In the second case the tumor was not so easily movable, and I thought it was an abdominal tumor, the nature of which I could not make out. In this case the liver was displaced, and the right kidney had gotten up on top of the liver—travelled around behind the poster-

ior edge of the liver and gotten up on top of it. That is a condition which it is well to bear in mind, although it is not a very frequent case.

Now, after hearing the rehearsal before you of the various conditions of the abdominal viscera that resemble diseases of the uterus, the conclusion we must draw is, first, that the gynæcologist of the present day, to be a safe gynæcologist, must be a general practitioner. He has no right, I believe, now-a-days, to start out and practice gynæcology without first having gone through a course in general medicine—at least, he will not be a safe man for a long time to come. In the next place, I want to call your attention to the fact that after the gynæcologist has started out in his career, after having served a term in general medicine, that then he is perhaps better fitted than the general practitioner to diagnose correctly the various diseases of the abdomen, because he will use bimanual examination more than the general practitioner, and his sense is educated to a degree that makes his examination of more value than that of the general practitioner.

Another point that Dr. Wylie has told us this evening that I should especially like to allude to is this: he has told us that if he has found no disease after having put the patient on his table and examined the pelvic organs, he has her go to her room and have her clothing removed in order to make a full examination of the abdominal viscera. I don't think that is quite complete enough. My opinion is that that should be done at the start, and a patient who presents herself for examination should have her abdomen exposed from the thorax down. Because if Dr. Wylie finds disease of the pelvic viscera he will go no further, being satisfied with the diagnosis he has made. He will treat his patient for that, perhaps, and find afterwards that her symptoms have not depended on the pelvic disease, but have depended on a movable kidney or on some other condition of the inter-abdominal viscera. But if he has investigated the case and his examination has shown him pelvic disease present he will not go any farther. I hardly think he intended to put it that way, but I wish to emphasize the point that we ought to make it a routine practice to examine the entire abdomen of the patient who presents herself for gynæcological examination. I always do that before I make the pelvic examination and then compare the results.

Dr. DUDLEY said: I am much pleased to hear the paper of Dr. Wylie to-night, because it teaches us to go outside of the pelvis, at any rate, for disease. I will try to confine myself to the paper, in my remarks, if possible, and as a part of the paper was a reiteration of what he said some years ago, I am pardoned for touching upon that, as

it is in the paper. I have a profound respect for his opinion and experience. Nevertheless I do not want him to have it all his own way, and I still believe that there is something in displacements that causes reflex trouble, or reflex pains that will be manifested in other parts of the body. Especially do I believe that the comparison that he draws between local disease in the pelvis and out of the pelvis, to which he is calling our attention, is due to reflex conditions. And I believe that one of the most prominent reflex conditions, or conditions that cause reflex trouble, is disturbance of the circulation in the pelvis. Now, then, if nature intended that a woman's uterus should lie cross-wise of the pelvis, I think nature would have supplied a proper circulation with the uterus in that position. Certainly if there is anything resulting from a displaced uterus—and the Doctor claims that it is not the displacement but what follows it—then why should not the displacement be corrected? I refer especially to anterior displacements of the uterus. I think we find that more cases of sterility accompany that condition than in any other displacement, and if we can get into the abdomen in most of the cases we will find atrophica of the ovary. What portion does the circulation play in it? We have been told that in about twenty per cent. of the cases the kidney is displaced more or less. I think we should be pretty careful how we make a statement to that effect, for this reason, that we have to take into consideration the shape and the build of every person. I do not think the anatomical relation of the kidney is the same for all the people that live on this earth, and I think if we stop to consider the circulation returning from the uterus to the kidney, and especially on the left side, we shall find that there is a cause there for kidney trouble. We all remember the length of the ovarian veins, and the manner in which the blood enters into the circulation of the kidney. For that reason I have criticised that portion of his paper.

Other than that I think that there are still many conditions that have not been mentioned, that are of extreme importance in a discussion of this paper. I have noted down a few of them that it has been my experience to meet with.

Adhesion, which the Doctor lays stress upon, in which the omentum and intestines are involved, is a condition which is apt to obtain with a woman who has had pelvic peritonitis or disease of the tubes or ovaries. So far as conditions of the omentum are concerned, I will pass by that portion of the subject, because it has already been well discussed. But very little was said of any abdominal

cancerous disease, and that is one of the most important conditions we should look after in examination of the abdomen. *Displacements of the spleen.* I have seen several cases of that where, unless a careful examination had been made, ovarian disease would have been diagnosed. Another condition is that of disease of the gall bladder, which has not been touched upon. Still another is disease of the rectum, up behind the uterus, the result of syphilis. Now, any good gynæcologist, a man who is alert for all forms of disease within the woman's body, when making an examination will invariably do it bimanually. He will place his hand upon the abdomen, and if there is disease above the pelvic brim he is on the alert for it and will discover it. But I should certainly hesitate to believe that so many people were travelling around with displaced kidneys. There is one other form of trouble and it is certainly a troublesome condition to the woman, that has not been touched upon, and it is an abnormal shortening of the sacral ligaments from disease or otherwise, which causes contraction upon the bladder and a painful urination. I think we have all of us seen cases of that kind. That is not strictly a disease of the uterus or appendages, but one due to trouble behind the uterus. So far as conditions of the rectum are concerned, I know of no more painful condition than that of cancer of the rectum, which has been allowed to go on until the systemic infection has taken place, while all the pain has been referred to the vagina and the bladder. I have now one patient dying from cancer of the rectum, who has been treated six months for uterine disease, when a simple rectal examination would have shown the whole thing. Another condition which has not been mentioned is that of abdominal hernia, taking place in the the linea alba—a condition simulating uterine disease. I think we have cases of that kind on record. Another condition which we may find, and that will bear close resemblance to disease behind the uterus, and that it has been my privilege to see, is that of angioma of the cellular tissues behind the uterus. I think Dr. Redmond can tell us something of that. It will be of interest to us. I know he has examined cases of that kind where a diagnosis has been made of uterine disease and a laparotomy made. I am glad to have had the privilege of listening to the paper, which was very interesting.

Dr. LOOMIS: This is certainly a very interesting subject, and I suppose most practitioners of medicine have had a good many trials of their power in making diagnoses of different forms of abdominal disease.

There has been a great deal said about movable kidneys to-night, and from what I have heard I should think it was a very common affair. Some three years ago I asked at Bellevue Hospital to make a special examination in regard to the condition of the kidneys, and the report thus far that I have received is that only three movable kidneys have been found on the autopsy table. You can imagine how many autopsies have been made, but either kindeys get into their normal position so well at the death of the patient that they are not recognized at the autopsies, or else they are not as frequent as we are led to suppose. I only make the statement. I have nothing to say about it, more than that.

Dr. WYLIE: I will state that my endeavor was not to make this an extended or a complete paper, or to go fully into any one subject, but more to draw attention to the subject in a general way. This was not that I did not believe that many others were doing the same thing that I had been doing, and it was not so much a criticism of my colleagues, but it was based upon this: Having been teaching now for some ten years at the Polyclinic, where I have usually quite a large class of intelligent practitioners, usually with more or less business to attend to at their home, I have found it, with rare exceptions, to be the rule that if I would have a patient present and read the history and examine her myself and then ask two or three gentlemen to examine her—that probably nine times out of ten the doctor will diagnose a displacement or laceration of the cervix or something of that kind. And knowing how common the old belief is—it may be very old now, and I should judge it was very old according to the remarks of Dr. Mundé—about displacements, and how through the profession the thing has taken a very great hold, so much so that the ordinary man coming to the Polyclinic will ordinarily diagnose for a displacement, and if he has found one it satisfies him that he has made a proper diagnosis—I thought best to deal with it. I did not claim that there was no cellular tissue in the pelvis, but simply stated that I thought ten years ago, and still more believe now, that there is no such thing as a chronic pelvic cellulitis. There may be an acute lymphangitis, but that is usually acute and I would hardly term it chronic cellulitis.

As to the diagnosis of abdominal tumors, I have virtually left that out because it is a large subject, and then I think it is pretty generally recognized now that none of us can make anything like a certain diagnosis of abdominal or pelvic tumors without opening the belly, and the more we operate the more we are sure of that fact—that the very

cases we have thought simple will often turn out to be not simple and entirely different from what we have diagnosed them. To-day almost any tumor of considerable size, unless the diagnosis is perfectly plain, is one, at least, of exploratory incision, if not for operation. And my wish was, as I say, to draw attention to the more common conditions that we see every day, which are mistaken for uterine trouble when the real trouble is in other viscera ; and I stated pretty plainly that in a great many of those cases, certainly those that come to me—probably for that very reason—I find them complicated with uterine diseases or accompanied by them.

As to the remarks of one of the gentlemen in regard to the effect of displacements on the circulation, I would say that if there is only a displacement the effect would not be produced unless the displacement resulted in fixation of the uterus, and unless that happened it would have very little influence on the circulation of the uterus. But I admit that a displacement may complicate the disease, may aggravate it, and should be corrected, and in some cases it would be almost impossible to cure the uterine disease without curing the displacement. But as for that being a cause for sterility, I cannot see it. I think most of the cases we get of that are cases of imperfect development of the generative organs, which I think is very common among the upper class of women, because it is so unusual for a woman to be allowed to develop the generative organs, it seems to me, in a normal way in this country, where from the age of ten to eighteen or nineteen she is more or less housed—not allowed to run with her brothers in the open air—and supposed in that time to learn all in the way of intellectual work that she is to learn or use during her life-time. The result is that the generative organs are undeveloped at the age of ten and not changed from what they were at two. They simply remain undeveloped and have no opportunity at all. There is not sufficient force in the person to develop them, and not being essential to life they are simply undeveloped. The cases are largely of that kind. The affliction is simply a case of an imperfectly developed, weak organ, and one subject to endometritis, and the pain is unquestionably due to the abnormal condition and the abnormal secretions, which together with the more or less injured os prevents pregnancy in the later stage. One very good proof of this is that if these girls marry early within two years they usually become pregnant. If they marry late, after the disease has become chronic, and the condition of the mucous membrane made worse, they are not so apt to and rarely become pregnant.

I am very glad to say that Dr. Mundé has shown himself always to be a very fair man in all discussions, and has one virtue very seldom found among the gynæcologists, at any rate, that is, that he will acknowledge when he is wrong. I have not the slightest criticism to make on his remarks about displacement.

Now, as to diseases of the omentum. In this paper it would have been almost impossible to cover them, but I fully agree with what Dr. Boldt says, except that this thickening and enlargement of the omentum, although it might be called a tumor, has seemed to me to be an inflammatory thickening, increased after an increased circulation, and in that way temporarily increased. Years ago I did remove the omentum when it was thickening, believing it to be an incurable disease, but unless it is infiltrated with pus, even if it is quite thick—two or three inches—I think it is safe to leave it, as soon as you have removed the irritating cause, the diseased tubes, the vermiform appendage or whatever kept up the irritation of the omentum. In one case that I had—a private case and of great importance to me—the omentum was enormously enlarged, so that it was as thick as my fist and probably four times as large, only not quite rounded, but flattened. In that case, on account of the formidable operation to take it away, I left it. The patient had a violent bronchitis develop soon after the operation, and the coughing separated the fascia, and later a large hernia developed. I afterwards had her flesh somewhat reduced and two or three years afterwards operated on this hernia, and I found that the omentum was almost perfectly normal—that this apparent tumor had simply disappeared. I would hardly class it as disease. I am satisfied that the abnormal condition of the vessels, and the displacement of the omentum, intestines and other organs downwards from the abdomen, are what cause the pressure and the pain, and not the other things that we usually regard as causing the trouble.

WILLIAMS ON PAPILLOMATOUS TUMORS OF THE OVARIES.¹

UNDER this head the author treats separately the two varieties of growth, (1) papillomatous cystomata, and (2) the superficial papillomata.

First taking up systematically the cystomata, he begins with the history. The gross anatomy and site are then considered. Contrary to the teaching of Olshausen, he believes that the majority of these growths are not intraligamentous, but pedunculated. Another point of difference between these growths and the glandular cystomata lies in the fact that in nearly half the cases they are bilateral. They rarely attain the huge proportions of the latter, rarely exceeding a man's head in size; and are usually composed of a much smaller number of cysts.

An admirable description of the histological anatomy is given. The author attaches little importance to the presence of cilia on the epithelium which covers the papillæ and lines the cystic cavities. He shows that their presence is purely accidental, and no ground for subdividing these tumors into two classes, as Olshausen and Von Velits have done. Attention is called to the psammoma bodies occurring in these growths, which can in no wise be regarded as pathognomonic.

The author has added a very valuable contribution to the knowledge of the histogenesis of papillomatous tumors of the ovary. The number of theories which have thus far been advanced are limited only by the number of structures entering into the anatomy of the ovary. All of these, and even the Wolffian body, have been regarded as possible sources of these growths. After discussing these theories, he goes on to show that the papillomata are not always derived from the same source, and consequently that those observers who advocate any one source or origin in all cases, although basing their statements on observed facts, take a too narrow view of the subject. Papillomatous cystomata may possibly arise from the relics of the Wolffian body, but positive proof has never been established.

To show that the epithelium of the Fallopian tubes may be a source of origin, the author brings to bear a case in which he discovered in the mesosalpinx a small papillary cyst and also numerous ducts

¹ The Johns Hopkins Hospital Reports, Vol. III., 1893.

of the same structure, the lining epithelium of which he was able to trace as continuous with the epithelium covering the fimbriated end of the tube, from which they were clearly outgrowths. He has also discovered ingrowths of the germinal epithelium into the ovarian stroma forming cystic cavities lined with ciliated epithelium, and from the inner walls of which papillomatous projections were springing. Furthermore, he establishes that the Graafian follicle is a source of these cystomata. Among the specimens cited is one in which there is a Graafian follicle lined with its typical *membrana granulosa*, and from which several small villous projections arise. This represents the earliest stage of development of a papillary cystoma from a Graafian follicle. Another specimen shows a follicle 7 mm. in diameter, situated on the anterior surface of the ovary, which on section is seen to contain a papillomatous growth arising from its internal wall. Further specimens show that not only non-ciliated but also ciliated papillomatous cystomata, and even intraligamentous papillomatous cystomata may arise from the Graafian follicle. The fact that Williams has discovered Graafian follicles lined with ciliated epithelium justifies the conclusion that the ciliated or non-ciliated condition of the epithelium is a matter of no importance. These cystomata he concludes are by no means of rare occurrence, but constitute about ten per cent. of all large ovarian tumors.

In speaking of the clinical history, he says that unless the papillomatous growths are developed within the folds of the broad ligament, or have led to the formation of secondary growths, their clinical history does not differ essentially from that of the glandular cystomata. Indeed, the only respect in which the symptoms of an unruptured, pedunculated papillary cyst differ from those of a glandular cystoma is that the former are usually of smaller size and slower growth.

The most prominent symptom, and the one which serves to direct the attention to this variety of growth, is ascites. In some rare instances it occurs without any sign of rupture of the cyst and consequent diffusion of the papillomatous masses over the peritoneum; but in the vast majority of cases its occurrence indicates the formation of metastatic deposits. The perforation of the cyst may be due in some instances to traumatism, but in the vast majority of cases it is due either to atrophy or fatty degeneration of the cyst wall, or directly to the internal pressure exerted by the rapidly-growing papillomatous masses.

He further states that where once the papillomatous growths have broken through the cyst wall, the growth of the papillary processes may so exceed that of the cyst that it gradually disappears, and can

only be discovered after a close search as a thin ring about the of the papillary masses. Occasionally the perforation of the cyst take place into the adjacent organs instead of into the peritoneal cavity and the papillomatous masses may then protrude into the bladder, tum, or even into the cavity of the uterus or vagina.

Marked hydrothorax, he states, is often a prominent symptom. is not usually due to a metastatic affection of the pleuræ, but appears to be merely an extension of the abdominal ascites. Finally, papillomatous cysts are very prone to become carcinomatous, and become anatomically, as well as clinically, malignant. Some of the carcinomatous papillary cysts may contain such an abundance of psammomatous material that their sandy character becomes a striking characteristic.

From the facts brought forward in connection with the question of metastases, it is shown that secondary growths may have their origin by mere continuity of growth, by implantation of bare particles of tumor upon the peritoneum and by the formation of true metastases.

In view of the marked tendency of these growths to secondary development, to the production of ascites, their liability to become carcinomatous and the excellent results following operation, after dissemination of the growth over the peritoneum, Williams believes that there can be no hesitancy in stating that the only treatment is the earliest possible extirpation of the growths, and that the presence of marked ascites and secondary growths should not be regarded as a contraindication so long as the patient has any reasonable prospect of recovering from an operation.

The superficial papillomata of the ovary he believes not to be so rare as they have heretofore been regarded. Although not more than ten cases have been reported, he himself has met with five cases of this variety; and he is inclined to regard it as a much more frequent occurrence than is generally supposed. The structure of the superficial growths is identical with those which occur within cysts. They may be sessile or attached by a pedicle of variable length. The epithelial covering may or may not be ciliated. Small cysts and capsules which are often continuous with the surface, are met within the superficial masses. In all probability the epithelium of these papillomata is derived from the germinal epithelium.

These tumors he believes to be very closely related to another, if they do not belong absolutely to the same class. A point of difference between the two varieties is, that in the superficial

the production of ascites and the formation of metastases occur at an earlier period, which is explained by the anatomical structure.

The author groups together, as follows, the salient features of the two forms :

1. Most papillomatous cystomata are not developed within the broad ligament, the majority of intraligamentous papillomatous growths being of other than ovarian origin.
2. These growths are derived either from the Graafian follicle or germinal epithelium ; their origin from the Wolffian body or from the tubal epithelium, while possible, has yet to be demonstrated.
3. As the origin of both the ciliated and non-ciliated papillomatous growths is identical, there is no justification for considering them as constituting two distinct classes of growths.
4. Polymorphism of the epithelium is not characteristic of ciliated papillomatous growths.
5. The formation of psammoma bodies is not pathognomonic of the ciliated papillomatous cystomata, for they occur in the superficial and non-ciliated varieties, and also in the normal ovary and tube, as well as in other parts of the body.
6. Superficial papillomata are of far more frequent occurrence than is generally supposed.
7. They are very closely related to the papillomatous cystomata, and are always derived from the germinal epithelium.
8. All varieties of papillomatous growths of the ovary have a marked tendency toward the formation of secondary growths. The majority of secondary growths are produced by mere extension of the growth by continuity of tissue, or by implantation of small particles of the tumor upon the peritoneum. In rare instances, true metastases may be formed.
9. The papillomatous tumors possess a marked tendency to become malignant, and even the anatomically-benign growths, in view of their tendency to the formation of secondary growths, are to be considered as clinically malignant.
10. The results of operations, even after the formation of secondary growths upon the peritoneum, are quite satisfactory.

JAMES P. WARFASSE,
The Johns Hopkins Hospital.

TRANSACTIONS OF THE EDINBURGH OBSTETRICAL
SOCIETY, JANUARY 11th, 1893.

Dr. HAIG FERGUSON read a paper on "Uterine Rotation: its Clinical Importance in Pregnancy and Labor."

In opening the subject he reiterated the statement he had made on a previous occasion, i. e., that it was not an uncommon occurrence for shock to accompany the application of the Credé method in the third stage of labor, and that the ovaries were carried to a position where they were in danger of compression during the expression of the placenta, because of the *uterine* rotation of the uterus in pregnancy and that this compression might produce alarming reflex manifestations. He thought that the study of the subject should be pursued by means of clinical observations, and that frozen sections alone were of no practical value in determining the exact position of a freely movable organ. Whilst the post-mortem uterus has lost none of its material constituents, yet it has lost that mysterious thing called life, to which its form and vigor were due and without which it is but a piece of inert matter dependent on accidental circumstances for its form and position. Rotation being to a great extent a vital property of the uterus, it tends to disappear when the muscular contraction ceases; the greater the muscular contraction and retraction, the more marked is the rotation. The position of the unimpregnated uterus, in addition to its inclination forward and its usual deviation to the right or left, is rotated, in the majority of cases, on its long axis so as to bring the left border forward. This movement is, according to certain authors, due to the pressure of the rectum during development on the left side and can be traced back in foetal life to the first development of the intestines. This rotation becomes more marked in the pregnant condition, especially during the last month. Schröder and Stratz found in a frozen section made on the body of a woman in labor at the beginning of the first stage, that the left border of the uterus was turned forward and downward, its right backward and upward. In certain animals uterine rotation is sometimes exaggerated to such an extent that the vagina is twisted secondarily upon itself, causing a serious source of dystocia. In pregnancy the left round ligament is found to be more tensely stretched than the right, this tends to increase rotation

by pulling the left border of the uterus forward. In the early months of pregnancy, the author thinks that the bladder and rectum help to give the uterus a set in the direction indicated. The full bladder bulges to the right side and pushes back the right border of the uterus: the loaded rectum pushes forward the left. He considers the disposition and arrangement of the middle layer of muscular fibres of the uterus a most potent factor in rotation. The position of the child, he thinks, is probably influenced by the rotation of the uterus. If this be allowed, then the demonstration of the frequency of the occurrence of the position will give the frequency of the occurrence of the rotation. When the uterus is rotated on its longitudinal axis to the right, its transverse axis lies diagonally in the pelvis in the right oblique diameter. This, to a great extent, accounts for the fact, that in cranial presentations, the vertex of the foetal head lies, in 99 per cent., in the right oblique diameter of the pelvis. He concludes, from personal observation and the study of statistics, that in vertex cases the uterus is rotated to the right on its longitudinal axis in at least 80 per cent. of cases.

Dr. BARBOUR, in discussing Dr. Ferguson's paper on uterine rotation and its clinical importance in pregnancy and labor, said that there should be a distinction made between anatomical and physiological rotation. He agreed that the uterus lay slightly rotated during pregnancy, but did not think that its rotation during the contraction of labor had been yet demonstrated. He said that there was no evidence that the normal ovary was as sensitive as the testicle, nor that compression produced shock. If it did, shock should be a frequent occurrence in Tait's operation. He had noticed evidences of disturbance in some cases when the pedicle was being tied, but never on grasping the ovary.

February 8th, 1893.

Dr. ROBERT BELL exhibited a multilocular ovarian cyst, weighing, with its contents, twenty-and-one-half pounds. The first cyst punctured contained a claret-colored glairy fluid. At its base was situated a considerable amount of placenta-like tissue. The semi-solid contents were adherent to the walls. The second cyst contained an olive-green fluid, having both the appearance and odor of fæces. The other two cysts were filled with a limpid fluid. The case was of special interest because of the fact that the mother had borne nine children at the comparatively early age of thirty-three; also, because the cyst did not rupture during labor nor even impede delivery. Patient returned home well.

J. DOUGALL BISSELL, M. D.

ITEMS OF INTEREST.

We are glad to announce the election of Dr. Norris of Philadelphia, Dr. Cushing of Boston, and Dr. J. Clifton Edgar of New York to membership in the American Gynæcological Society at its annual meeting last month. The Society is to be congratulated upon its acquisition of these three men, who are not only prominent in the section in which they practice, but are favorably known by their work to the profession throughout the country. Moreover, Dr. Cushing's election, as a distinguished and fellow-editor, is particularly gratifying to us. We are especially pleased, and very naturally so, at the selection of our townsman, Dr. Edgar, whose rise to prominence, particularly in obstetrics, in this city has been both rapid and thoroughly well-deserved. Of much energy and capacity for hard work, of clear and even judgment, Dr. Edgar, with the large experience which is already his, holds an excellent promise of future celebrity. The American Gynæcological Society could have obtained no member more useful or more valuable among the younger generation of professional men.

ERRATA.

The following errors, for which the JOURNAL is responsible, in Dr. Coe's original paper printed in this issue: Page 457, line 1. For "I think that" read "I do not think that." Page 459, line 1. For "repairing the cervix" read "before repairing the cervix."

ANNOUNCEMENTS.

We call the attention of our readers to the eulogy of Dr. C. Carroll Lee which we publish in this issue. The main facts of his early life and of his family history we obtained from the Doctor himself, several months ago, when his fine physique and perfect health gave promise of a life of many years. We had intended to present our readers a *sketch* of Dr. Lee in the "Series of Eminent Gynæcologists and Obstetricians of America," but his death a few weeks ago, especially sad in its unlooked-for suddenness, left us but material for his obituary notice. The portrait which accompanies it was taken from a recent photograph and was an excellent likeness of him as he looked shortly before his last illness.

The unprecedented delay in the publication of the May issue of the JOURNAL, which was due to the broken promises of the engraver to make the cuts for Dr. Emmet's article on the "Founders of the Western Hospital Association," has necessitated a delay in this month's issue as well; we trust, however, in future to publish punctually on the first day of the month, a practice inaugurated with the March and April numbers.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

JULY, 1893.

THE TECHNIQUE OF PRIMARY CÆLIOTOMY IN
ADVANCED ECTOPIC GESTATION, WITH REPORT
OF A SUCCESSFUL CASE.

BY WILLIAM T. LUSK, M. D.

Mrs. K. was sent to me at the Bellevue Hospital by Dr. D. H. Williams of Knoxville, Tenn., for diagnosis and, should need be, for operative treatment. She was thirty-three years of age, had been married twelve years, and had one child six years old; she had no trouble in child-birth. She had enjoyed good health with the exception of an attack four years ago, when, following menorrhagia, she had pelvic paroxysmal pains, which occurred at intervals and lasted about two hours at a time. These kept her in bed for a period of nearly six weeks and then terminated in complete recovery.

In November of 1892, Mrs. R., after twice passing her periods, had what was supposed to be a miscarriage. On the first of December she had a slight show. Since then she has had no regular menstruation but a continuous sero-sanguinolent discharge. At intervals she has had severe paroxysmal pains which have been treated by large doses of morphine.

When the patient reached the Hospital on the 31st of March, 1893, she was much emaciated. Her appetite was poor, and she was taking about a grain of morphine for pain daily.

On external examination a tumor was found, which, according to the statement of her physicians, had had its origin in the right iliac region. It extended nearly across the abdomen and reached upward to the navel. In its general aspect it resembled a pregnant uterus and could be felt to harden on palpation. Below and to the right a rounded body could be felt, bulging from the tumor, which resembled a child's head.

Per vaginam, the uterus could be mapped out distinct from the tumor. Its cavity, as measured by the sound, was three inches in length. The tumor was evidently attached to the posterior uterine wall. It crowded the pelvic space. The portion reached through the vaginal tissues imparted to the finger the doughy feel of the placenta.

Both the history and the objective signs favored the diagnosis of extra-uterine pregnancy. The continued growth of the tumor, for it speedily rose above the navel after the entrance of the patient into the hospital, argued in favor of a living child. At the same time, I could neither obtain ballottements, nor hear the sound of the foetal heart; nor had quickening been experienced by the patient.

Dr. Polk saw her on the 8th of April. He confirmed the impression of pregnancy and advised a speedy operation. The latter was appointed for the 15th of April but had to be deferred, as Mrs. K. was seized the evening previous with a severe febrile catarrh.

On the 19th of April, the operation was performed with the assistance of Dr. Austin Flint jr., Dr. Studdiford and Dr. Thompson. The abdominal incision extended from about two inches above the navel to the symphysis. The exposed tumor had the reddish blue aspect of the pregnant uterus. The small intestines were everywhere adherent to its upper portion. The descending colon was displaced inward and pursued an oblique course from the iliac fossa toward the ensiform cartilage. The uterus was attached to the tumor by its lower posterior surface and was deflected to the right of the median line. Its fundus and lateral surfaces were well defined. On the right side a portion of the tube, about half an inch in length, extended from the right cornu to the sac. The left tube was of normal dimensions and was apparently attached to the sac by a short fold.¹

The sac was subperitoneal. Its lower segment occupied the

¹ The appearances were such as to suggest the primary development of the ovum between the folds of the right broad ligament, the subsequent lifting up of the peritoneum from the posterior uterine wall, and the final partial separation of the folds of the left broad ligament.

entire pelvic space. It was attached to the posterior surface of the uterus beneath the peritoneal covering. There was no pedicle indicated. It was clear that the pregnancy had started in the right tube and had subsequently developed to a great extent between the folds of the broad ligament. The abdominal portion of the tumor contained, as shown by the contractions, and subsequently by microscopic examination, muscular fibres, presumably derived from the tubal walls.

I, at first, attempted to separate adherent intestines. This, however, was somewhat difficult and was associated with profuse bleeding from the sac surface. I was therefore obliged to desist and to proceed to first tie the ovarian arteries. Access to the vessel at the right ligamentum infundibulo-pelvicum was difficult, as the sac everywhere was in close contact with the pelvic wall. Two ligatures were easily applied at the uterine insertion. For further security, I tied the left ovarian artery, which apparently distributed vessels to the covering of the ovum. These ligatures controlled the bleeding to a marked degree. I then cautiously cut down through the walls of the enveloping sac to the ovum, about two inches above the fundus of the uterus, and rapidly enlarged the opening in a transverse direction with blunt-pointed scissors. The separation of the ovum was easily effected by the fingers. I had intended to follow the example of Schauta and remove the ovum entire, but before the work was completed the sac ruptured and a living foetus escaped. As the rupture was followed by increased hemorrhage, I directed my assistant to compress the aorta, while the enucleation was completed. Fortunately, this was accomplished in a few seconds. The hemorrhage which followed from the placental site was promptly controlled by packing the cavity with iodoform-gauze. My assistant next transferred his fingers from the aorta and pressed the gauze firmly downward into the bleeding space.

Afterward I was able to leisurely detach the remnants of membrane which were adherent to the intestines and to tie off the residue of the sac walls which extended from the uterus along the site of the affected tube. When the work was finished, there remained only of the original cavity the space between the ligamental folds and the denuded posterior uterine wall.

After the trimming had been completed, the packing was withdrawn and quickly replaced by a Mikulicz pouch, into which was crowded two strips of gauze, each a yard and a half in length by a half yard in width. The abdominal incision, as far as the pouch permitted, was then closed. The operation lasted about fifty minutes and was

performed in the presence of upwards of one hundred and fifty spectators.

The child moved its limbs after its birth, and though nothing was done for its preservation it lived for twenty-six minutes. It measured 11-12 inches in length and weighed about twenty-four ounces. It had fine hair upon its head. There was some fat in the cellular tissue, but no lanugo and no vernix caseosa. The eyelids were separate, and the pupillary membrane was still distinct. The nails did not reach to the tips of its fingers. It was evidently well advanced in the sixth month.

The patient suffered a good deal from shock following the operation. The temperature sank to 95.6° , but in the evening she rallied. At nine p. m., the dressings were found soaked in serum tinged with blood. Afterward the amount of discharge was moderate.

The pulse was rapid (112-140) during the first two days. The temperature remained normal until the fifth day. It then rose to 101.8° , and the patient suffered a good deal from tympanitis. She was given three grains of calomel, and an enema of chamomile infusion was administered. A portion of the gauze dressing was removed. On the following day (6th) the patient had many watery stools; the pulse and temperature were thereafter normal, but she had much discomfort, and the face had a pinched aspect until the 28th of April (9th day) when the stitches and the remainder of the gauze were removed. Convalescence has since then been uninterrupted. The patient has regained her flesh and color, and the sinus has nearly closed.

So far as I have been able to obtain records, there have now been reported thirteen successful cases of cœliotomy performed with the fetus living in the second half of ectopic pregnancy, viz: those of Breisky, Braun, Eastman, Jessup, Rein, Lazarewitsch, Lusk, Martin, Olshausen, Schauta, Taylor, Treub and John Williams.

In deciding the question of a primary operation in the case I have narrated, it was needful that I should study with care the work of my predecessors. Most writers on the subject have declared in favor of awaiting the death of the child and the secondary arrest of the placental circulation. But the statistics of Schauta confirm the apprehension that, what with sac ruptures, intestinal and visceral perforations and sepsis, there is but slender hope of a happy issue when a waiting policy is adopted.

Of the fortunate cases, that of Jessup¹ is sufficiently familiar. The child, which was free among the intestines, was removed through an

¹ Jessup, *Obst. Trans.* Vol. XVIII. (1876) p. 261.

abdominal incision. The cord was drawn out at the lower angle of the wound, and through the opening thus left the putrescent placenta was gradually discharged. The patient's recovery was practically complete at the end of two and one-half months. This was the first authenticated recovery from the primary operation.

In the *Obstetrical Transactions of London*, for 1891, p. 1151, John W. Taylor of Birmingham reported a similar case. The foetus was at term and free in the abdominal cavity. Dr. Taylor removed the child and left the placenta behind. The incision was closed after inserting a drainage tube and drawing the cord out at the lower angle of the wound. On the morning of the twelfth day, the wound was reopened on account of septic symptoms. The cord was gangrenous and the placenta was beginning to putrefy. The placenta was separated, and the alarming hemorrhage which followed was with difficulty controlled by the pressure of a large sponge wetted with a dilute solution of perchloride of iron. A drainage tube was inserted. The patient had subsequently thrombosis of the left iliac, of the inferior cava, of the right iliac, and of the right renal veins. She was discharged quite well at the end of three and one-half months.

In both these cases, the fortunate results belong to the domain of miracle and do not invite to imitation.

Olshausen¹ under similar circumstances found the placenta attached to the right broad ligament. By tying the ligament beneath the placenta, the latter was removed without loss of blood. Again in a like case, Braun Fernwald² tied the broad ligament to which the placenta was attached and thus removed the upper portion without difficulty, but on the posterior surface of the uterus and in the cul-de-sac the separation was not practicable. He, therefore, amputated the fundus of the uterus, after applying an elastic ligature, and stitched the funnel-shaped cavity of the cul-de-sac of Douglas to the abdominal wound and filled it with iodoform-gauze. The operation was performed on the 11th of February and the patient was discharged cured on the 13th of April.

John Williams³ performed coeliotomy in the thirty-fifth week of pregnancy. He opened the sac walls, removed the foetus and stitched the incision to the abdominal wound. No hemorrhage followed, but portions of the placenta continued to discharge for about five weeks.

¹ Olshausen, *Deutsch Med. Wochenschr.* 1890, p. 174.

² *Arch. f. Gynaek* Vol. XXXVII, p. 286.

³ John Williams, *Obst. Trans. London*, vol. XXIX., p. 482.

The patient left the hospital cured in a little over two months. The method resorted to in this case is the one that has been most frequently employed for the primary operation.

Treub's case¹ was somewhat similar; but he first separated the placenta from its attachment to the parietal peritoneum, then resected a portion of the sac, and finally attached the borders of the portion which remained to the abdominal wound. A lining membrane was detached from the inner surface of the sac and the latter was sprinkled with iodoform and filled with a Mickulicz pouch. The operation was performed on the 29th of May. The patient was discharged by the 9th of September with a small fistulous opening.

Martin² was the first operator to lessen the risks of hemorrhage and sepsis by the removal of the placenta after tying the supplying vessels in the broad ligament beneath the placenta and to the side of the uterus. This he did in 1881 in the days of imperfect Listerism. The patient was in the seventh month of pregnancy. The sac was afterward closed on the peritoneal side and drainage was accomplished through an opening made into the vagina.

Breisky,³ however, was the first to place the operation on a solid surgical basis by showing that it is practicable to remove the entire ovum. His patient was at the end of the eighth month of pregnancy. He first stitched the sac to the abdominal wound, opened it and removed the foetus. He then removed the stitches, ligated the broad ligament on the side of the uterus, and separated the tumor, tying at the same time any large vessels found bleeding in the cut surface. By progressive ligation of the base from within outward toward the pelvic wall, the sac with the contained placenta was detached with slight loss of blood. Packing the cavity with iodoform-gauze was subsequently resorted to.

A year later our own Eastman⁴ removed the entire sac in an ectopic pregnancy of the tubal variety at the eighth month. He was able to clamp the uterine end of the tube and the broad ligament and to cut away the portion which contained the ovum. He afterward quilted the stump with iron-dyed silk. The patient made an excellent recovery. The operation of Eastman stands as one of the finest achievements of American surgery.

¹ Treub, *Ztschr f. Geb. und Gynack.* Vol. XV., p. 384.

² Martin, *Berl. Klin. Wochenschr.* 1881, p. 775.

³ Breisky, *Wiener Med. Presse*, No. 48, 1887.

⁴ Eastman, *Am. Jour. Obst.* Vol. XXI. Sept., 1888.

Now while these successes favored the belief that a large number of cases of ectopic pregnancy in the second half of gestation were amenable to surgical treatment even when the child was living, it has been maintained that in cases like my own, where the growth occupied the entire extent of the ligamentous folds, it is the part of wisdom to refrain from interference until the death of the child took place and the placental circulation was arrested.

But on the 10th of January 1891, Schauta¹ successfully applied to a case of the kind the principles which govern the removal of intraligamentous ovarian cysts. After tying the ovarian artery at the peritoneal fold, which constituted the residue of the ligamentum infundibulopelvicum, he incised the peritoneal covering in a circular line corresponding nearly to the largest circumference of the sac. The enucleation of the latter was readily accomplished without rupture of the sac walls. Considerable hemorrhage resulted from the detachment of the ovum from the uterus. This was temporarily controlled by pressure and later by sutures. The peritoneal borders of the cavity were then sutured to the parietal peritoneum, and the cavity itself was drained by a Mikulicz tampon.

It was the study of Schauta's case that made my own success possible. There were differences of detail in the conduct of the two cases, but these were of minor importance.

On the 4th of February 1890, i. e. nearly a year previous to the case of Schauta; Prof. Rein² of Kiew reported a successful operation in the thirty-seventh week of pregnancy. He stated that the foetus, the placenta, and all the membranes were removed by enucleation from the peritoneum in precisely the way resorted to in intraligamentous ovarian cysts. The mother made a good recovery. The child was alive two years later. The particulars of this interesting case are not given.

While it is evident that much remains in the way of perfecting the technique of the primary operation in advanced extra-uterine gestation, the evidence herewith presented is sufficient to show that under the most difficult circumstances it is not necessary to fold the hands and gamble with the lives of our patients.

¹ Schauta. *Beitrage zur Casuistik Prognose und Therapie der Extrauterin Schwangerschaft.* Prag. 1891.

² Rein, *Zur Laparotomie bis Extrauterin Schwangerschaft.* *Centrblatt für Gynæk.* No. 50, Dec. 17th, 1892.

OPERATIVE VERSUS ELECTRICAL TREATMENT OF
DYSMENORRHOEA.¹

BY A. LAPTHORN SMITH, M. D., M. R. C. S., ENG.

Montreal.

The disease, the treatment of which forms the subject of this paper, is sometimes one of the most difficult and tedious that we are called upon to prescribe for. We all know that we can relieve the suffering by hypodermic injections of morphine or other opiate; or even by the administration of anodyne medicine by the stomach, but knowing as we do, the terrible danger of contracting the habit of resorting to these drugs, we are loth to have recourse to a treatment which is often so disastrous in its results.

It is a pretty generally acknowledged fact that a great many of the women who find their way to retreats for the cure of the opium or chloral habit, first began to take these medicines for the relief of the pain of dysmenorrhœa. Many of the women suffering from this disease, who have consulted me, have told me that they have had morphine administered to them by hypodermic injection, several times a day for several days, every month for many years, so that at the best, this treatment is not only dangerous but inefficient. Since we have the anodynes of the coal-tar group, such as antikamnia, antifebrin, antipyrin, phenacetin, etc., the danger of forming a narcotic habit has considerably diminished, nevertheless no one who has used these drugs to any extent can say that they are totally free from injurious effects. The red corpuscles of the blood cease to carry oxygen, the muscles of the body, including the heart are insufficiently nourished, and the activity of the nervous system is dulled, so that we cannot employ these drugs for any length of time without the patient being the worse for them; moreover the patient, when she comes to us, generally asks for a treatment which will not only relieve at the time, but will cure her, so that she will remain well without further treatment. In some cases it is true, especially those in which there is an obstruction at the internal os owing to flexion of the uterus from want of tone, certain uterine tonics, such as viburnum, often prove not only palliative but actually curative in their effects.

¹ Read before the Michigan State Medical Society, at Muskegon, May 12, 1893.

There are other cases, in which there exists acute inflammation of the tubes and ovaries, and even of the uterus itself, in which ordinary local antiphlogistic treatment is all that is required. When the bowels are regulated and the congestion or inflammation of the uterus has been relieved by painting the vaginal roof with iodine, and the application of well-saturated boro-glyceride tampons, the periods will often recur entirely free from pain. On the other hand, there are cases of dysmenorrhœa due to poverty of the blood in general, and of the blood supply of the ovaries in particular, generally classed under the term of neuralgic dysmenorrhœa, which are completely cured by the administration of iron and phosphoric acid, together with good food and sunshine.

But apart from these cases of congestive, anæmic, and inflammatory dysmenorrhœa there are other cases where the whole trouble is situated at the internal os, which being too small, is further blocked up by the chronic swelling of the mucous membrane lining the canal, so that when the natural congestion, occurring at the menstrual period, comes on, the outlet of the uterus is completely blocked. Sometimes this congested mucous membrane about the os falls in tiny folds like so many valves upon the orifice, and the more the uterus contracts, in order to expel its bloody contents, the more tightly are these valves forced upon each other, until the outlet is still further closed. If the menstrual blood continues to be poured out into the cavity of the body of the uterus it must there accumulate until the expulsive efforts of the organ either force it past the internal orifice of the cervical canal, with tearing and grinding pain, or it may sometimes, as I believe it does, force the blood back through the tubes into the peritoneal cavity, causing a variety of hæmatocele, which is probably more common than is generally supposed. In such cases the treatment should be directed to two points: The one to open up the stenosed cervical canal, and the other to shrink up or thin the swollen and spongy mucous membrane, which fills up its calibre.

These two objects may be obtained in two different ways, the one, the older, which we owe to the brilliant efforts of Goodell of Philadelphia, is an operative treatment and is known as rapid dilatation: for owing to the dangers attending the use of dilatation by sponge-tents or laminaria, digitata or tupelo these slow methods should be and pretty generally have been abandoned. The only operative treatment which is at all safe is, therefore, that of rapid dilatation and is the treatment which I have used in a considerable number of cases, with what result I shall presently mention.

The electrical treatment of dysmenorrhœa is much younger than the operative and owes its introduction, principally, to the efforts of Apostoli of Paris, who was the first to point out that the negative pole of the galvanic current had a decidedly dilating or relaxing effect upon stenosis of the canal. I had already, while engaged in general practice, at the suggestion of Newman of New York, employed this method of treating urethral strictures, and I was positively convinced in every case in which I employed it, that I was able to pass a constantly increasing size of bougie. It was also pointed out by Apostoli, and afterwards by Massey of Philadelphia, that in some cases of dysmenorrhœa, especially those complicated with chronic endometritis, that the positive pole of the galvanic current had the effect of toning up the relaxed and swollen mucous membrane, so that at the next menstrual period, the flow came on painlessly and absolutely without any expulsive efforts of the uterus whatever.

The question which now comes up for discussion in a given case of dysmenorrhœa in which the trouble is due to stenosis of the cervical canal, with or without endometritis is: which is the better method of treatment, the operative or the electrical?

As I have employed both methods of treatment quite extensively, and am moreover an admirer equally of both of the principal advocates or inventors of these methods of treatment, I feel in a position to come to an impartial decision on this matter and therefore, with your permission, will place them briefly before you.

The matter may be looked at from two points of view: First, of course, with regard to the patient, and secondly with regard to the physician. As regards the patient, the operative treatment is far from a pleasant one, the power of the circular fibres of the internal and external os is very great, and they cannot be stretched to the point of relaxation, namely, to the distance of an inch and a quarter or an inch and a half of separation of the blades of the dilator, without causing so great a pain that no woman could bear it without anæsthesia. Then, again, this necessitates its being done at her home, and that she be confined to bed for two or three days at least. Besides, the force required invariably bruises the walls of the canal and generally tears them more or less. Of course, the operation must be performed under strict asepsis, otherwise we would have an acute lymphangitis of the lymphatic channels running up along the side of the uterus to the peritoneal cavity, so that any failure in carrying out antiseptic precautions will be almost invariably followed by peritonitis, which, if it becomes general,

is invariably fatal. The uterus must also be drawn down for the introduction of a dilating instrument, and in the case of diseased appendages, which may have been overlooked, these may start leaking into the peritoneum, thereby rapidly setting up inflammation in that sac: not only this, but in a great many cases the uterus has been ruptured by the force required for effective dilatation, and although this is not always dangerous, provided the asepsis is perfect, yet in many cases the results have been alarming. The number of deaths from peritonitis, that have followed rapid dilatation is far greater than will probably ever be known, as they generally occur in the practice of physicians who have never employed this method before, and who making the mistake of employing too much force, in order to perform the operation more quickly, without perhaps obtaining thorough asepsis of the field of operation or instruments. They have a fatal case of peritonitis which is never reported but which has the effect of preventing them from ever using the treatment again.

There is another danger, which as Emmet has pointed out has happened more than once, and that is that malignant disease sometimes starts in the angle of one of the slight tears, which often follow operative treatment. So that, as far as the patient is concerned, the objections to the operation are that it requires an anæsthetic, the presence of at least two physicians and a nurse, confinement to bed for from three to seven days, exposure to the risk of lacerated cervix with its chances of cancer developing, to the risk of rupture of the uterus with the chances of a rapidly fatal peritonitis, and to the dangers of inflammation of the lymphatics of the uterus, or to disturbance of already inflamed appendages, in either case leading to either general peritonitis or at least to local peritonitis with its attendant exudation and adhesions. In addition to these risks, the operation unfortunately is not always effectual, the stenosis returning sometimes within a month or two after a thorough, rapid dilatation.

In return for all these disadvantages, the operation has the great merit of being rapid and, when successful and not complicated with any of the accidents above mentioned, is followed by a cure of the patient there and then. If there is no inflammation about the uterus or appendages, as we should take care that there is not before undertaking an operation, and if the operation and everything connected with it is strictly aseptic, then one treatment, so to speak, is all that is required. This has made many of my patients decide to give the operative treatment the preference. From the point of view of the

physician the treatment by rapid dilatation has the disadvantage that he cannot carry out the treatment alone, and that he cannot carry it out at his office, but is obliged to go sometimes a considerable distance to the patient's home and remain there, not only while preparing for the operation and while performing it, but even sometimes for several hours after. He must also have some experience in operations about the female pelvis, and he must possess several somewhat expensive instruments. These, I think are the principal advantages and disadvantages of the operation, as considered from the point of view of the patient and the physician.

Let us now look at the electrical treatment of dysmenorrhœa, in the same way :

First of all, in my experience, it is equally, if not more effective than the treatment by operation, that is to say, that it has never completely failed to relieve the suffering. In the majority of cases that I have had, the relief was permanent, and in the two cases in which there was a slight relapse, the cure became permanent by continuing the treatment a few times longer. From the patient's point of view, the treatment by electricity is much more pleasant than the operative treatment. First of all, she has no terror of taking the anæsthetic, she is not subjected to the unpleasantness of being exposed before three or more witnesses ; she can have the treatment carried out by calling twice a week for a few minutes at the doctor's office, without the excitement of an operation being performed at her own home. She is not exposed to the danger of laceration of the cervix with its attendant risks of cancer, neither is she so liable to the danger of local or general septic infection, if electrical treatment is carried out with ordinary precautions, that is to say, with an ordinary uterine sound, insulated just far enough down to allow it to enter beyond the internal os and provided it has been bent to the angle which previous bimanual palpation has shown to be that of the uterus, and provided no force whatever is employed in the introduction of the sound, which force, moreover, is quite unnecessary, as in a few minutes the sound will gently slide into the narrowest canal, once the current has been turned on.

The treatment is in no way painful, for only a very small strength of current is required, such almost as the patient can barely feel. The instruments can be easily rendered aseptic by passing them through the flame of the spirit lamp and, moreover, there is no bruising or solution of continuity caused, in the cervical canal, by which bacilli or deposits may enter the lymphatics. From the physician's point of view

the electrical treatment has the advantage that he can carry it out at his office, requiring only five minutes for the patient to get on a chair and the electrodes to be arranged, five minutes of an application of the current and five minutes for the patient to dress; or a quarter of an hour altogether, without his being obliged to leave his office. The apparatus required is not nearly so costly as some might think. A friend of mine has used this treatment at my suggestion, with very satisfactory results, in several cases, with no other apparatus than ten galvanic cells and one rheostat, one abdominal electrode of clay and the ordinary Simpson sound with a small hole bored in the handle for the reception of the negative wire. In lieu of the galvanometer, which is somewhat expensive, he judges of the strength of the current by the bubbling of hydrogen gas which always occurs at the negative pole, and of the strength of the current by consulting the patient's feelings, as it is a rule never to employ it strong enough to cause her any pain. Of course if it is desired to obtain considerable dilation of the canal, a set of interchangeable olivary bougie tubes may be substituted for the sound, but this adds very little to the cost of the apparatus, so that from the physician's point of view, the advantages of the electrical treatment are: That it can be done at his office without causing the patient or her family any alarm, with the consumption of very little time, and without those feelings of anxiety which one always has in the performing of the slightest operation on the uterus.

I have already said that rapid dilatation does not always cure. Although I have always performed it under the strictest antiseptic precautions, preparing the vagina as though I were about to do a major operation, and although I have never performed it when I have been able to detect the slightest disease of the tubes, and although as a rule the following period has been almost free from pain, yet in about ten per cent. of the cases the pain has increased at each succeeding period until it became as bad as ever. This recurring of the symptoms led me in the last three cases to try to prevent the internal os from contracting again by introducing a stem pessary either of glass or gutta-percha which I took care to boil in plain water and afterwards preserve in strong sublimate solution. In two of these cases a metritis was set up and in the other I was obliged to remove the stem in order to prevent a similar result. One of the cases subsequently developed a pyosalpinx which I will yet probably have to remove. My experience with the negative galvanic current has been very satisfactory, having had no untoward results and in the very few cases which have relapsed

the cure has become permanent by giving two or three further applications. In no case have I had any anxiety lest accidents should occur.

In conclusion I should say that both methods of treatment are of great value ; preference being given to rapid dilatation when the patient will consent to an operation and when a skilled operator can be obtained ; while the electrical treatment can be reserved for those women who cannot be induced to submit to operation or who are not in a position to obtain the services of one who is accustomed to operate on the pelvic organs.

I trust that my brief paper may serve to elicit some discussion by those who, having tried both methods, may be in a position to give us some information as to the best manner of treating those troublesome symptoms of dysmenorrhœa.

SUPRA-VAGINAL ELONGATION OF THE CERVIX UTERI WITH ABNORMAL DISTRIBUTION OF THE LIQUOR AMNII IN PREGNANCY.¹

BY CALVIN THAYER ADAMS, M. D.

In the Edinburgh *Medical Journal* of March 1888, Dr. Montagu Handfield Jones of London wrote an article on "An unusual condition of the Uterus during the early months of Pregnancy" due probably to diminution of the normal quantity of the liquor amnii, and in June, 1888, I wrote on the same condition in the same journal, ascribing it to elongation of the supra-vaginal portion of the cervix uteri, basing my paper on the observation of one case.

This condition consists of a uterus elongated above the vagina, with an amniotic sac located only near the fundus. The long cervix feels like a normal uterus, and the fundus with its sac feels like a distinct tumor. The softened portion between the two feels like a pedicle.

Since writing the above-mentioned paper I have seen two more cases of the same condition, one due to an elongated supra-vaginal cervix ; the other I lost track of.

¹ Read at a meeting of The New York Obstetrical Society, April 18th, 1893.

Attention has been called to this condition in the non-pregnant uterus by Hugier, Martin, Hegar, Scanzoni, Gallard, Monat, Depaul, Fritsche, Verneuil, Campana, Loghiades, Klot, Pozzi, Crevet, Crenveilhier, Guérin Maissonneuve, Peán, Schroeder and others.

It is observed most frequently in multiparæ and consists usually in an hypertrophy of all of the tissues of the cervix, muscles, glands and connective tissue. It occurs congenitally and as a result of endometritis, prolapse, new growths, ante- and retroflexions, retroposition and with perimetritis, bands and exudation; also after prolonged labor, and from leaving the bed too soon after labor. With this condition occur dysmenorrhœa, conical cervix, sterility, irregular menstruation, generally scanty, sometimes menorrhagia; amenorrhœa sometimes lasts for years.

In forty-six cases observed by Von Rabenan when assistant to Dr. Martin in Berlin, forty-three had antelexion and three retroflexion; the cervix measured from three to four centimetres in length, the corpus two to three and one-half centimetres.

In these cases many of the early signs of pregnancy are absent; but one sign to which Hegar called attention in 1882 is invariably present, that is, the early softening of the body of the uterus where the cervix joins it, and this is probably the chief source of the errors of diagnosis which are so frequent. The pliable lower segment allows the rest of the corpus to be moved quite freely independently of the long cervix. In speaking of ordinary pregnancy Hegar says that with the thumb in the vagina and one finger in the rectum above the third sphincter, and the other hand on the abdomen, this softened portion often feels as thin as cardboard.

The pathology of this condition is somewhat obscure. There certainly is in every case an elongation of the cervix above the vagina, and in some it appears to be a permanent hypertrophy, while in others it seems to be only a part of the general uterine growth due to the pregnancy.

There is also in every case an abnormal distribution of the liquor amnii, it having been located practically entirely near the fundus uteri so as to form a distinct tumor; and the lower segment of the uterine body must be materially softened to give the appearance of a pedicle with a tumor beyond.

The first to point out this condition in pregnancy was Dr. A. Martin of Berlin in a paper presented to the Berliner Gesellschaft für Geburtshülfe und Gynækologie, in 1880.

He related seven cases, in which the chief interest was that in consequence of the elongated cervix the corpus formed apparently a distinct tumor, leading to errors of diagnosis as well of the pregnancy as of that tumor.

In the three cases which I have had an opportunity to examine, there has been what appeared to be a normal or somewhat anteflexed uterus, cervix slightly softened in two cases, in one feeling practically normal.

In all three cases, what appeared to be the body of the uterus was anteflexed on the cervix, feeling nearly normal in size and consistency; in one feeling more narrow than usual where the cornua should be.

In all three there has been a mass varying in size from a hen's egg to a large orange, apparently connected with the fundus uteri by a distinct pedicle in two parts. In one there was not sufficient suggestion of a pedicle to make me positive that the mass was connected with the uterus.

In two cases the mass lay slightly to one side and in front of the apparent fundus, in the other at the second month directly between the vagina and bladder, and at the fourth month somewhat on one side.

In one case after labor at term the uterus measured four inches, the elongation being apparently in the cervix above the vagina. Another miscarried at four-and-one-half months and two months later on examination the uterus measured only three inches and appeared normal.

I will mention one case, that of Mrs. R., æt. twenty-two, married one year, menstruation always irregular, from one to three months elapsing between periods, slight dysmenorrhœa. Five months before I saw her, patient had an unusually painful period, confining her to bed for four days; flow scanty.

One-and-one-half months later again confined to bed with pelvic pains and vomiting of all nutriment.

Bi-manual palpation revealed what appeared to be a small hard sharply anteflexed uterus, and in front of the fundus, between the vagina and bladder, a mass having the size of a cricket ball and the consistency of a soft myoma.

The mass could not be moved independently of the uterus, but a distinct depression could be felt between them.

Patient was confined to bed for two weeks, lost considerable flesh and strength; morning vomiting continued for a month; then for a few days complained of frequent micturition and irregular sharp pelvic pains.

Having again occasion to examine her under chloroform in company with Dr. Martin, the supra-vaginal cervix is found to be much elongated, and beyond a softened portion is felt the body of the uterus, lying to the right of the median line, soft and corresponding to about the fourth month of pregnancy. Vulva cervix and breasts correspond.

This condition is liable to be confounded with tubal or cornual pregnancy, or ovarian, or uterine tumor.

I have to thank Dr. A. Martin for many of the authorities mentioned, and I hope that the rarity of the condition and danger which may follow an error of diagnosis will be sufficient apology for again calling the attention of the profession to it.

A NEW OPERATION FOR ACQUIRED RETROVERSION AND RETROFLEXION.¹

BY WM. R. PRYOR, M. D.,

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It is extremely difficult to find a plate from frozen section which represents the normal relations of the pelvic organs, but Waldeyer's seems to do so. An inspection of this plate will demonstrate that the uterus is attached to the bladder at a point considerably above the os internum. This union below the os internum is quite firm, as all of us know who have done hysterectomy; but above that point it is composed of loose cellular tissue. (Plate XXV, Hart's Atlas). The vesico-public ligament is here shown and the retropubic loose cellular tissue and fat. The ligament is tense, the bladder being contracted, and further backward motion of the bladder is impossible. The strength of this ligament is well shown in Fig. 4, Plate XXIX, Hart's Atlas, where the upper portion of the bladder is still in position, although the prolapsed uterus bears the entire intra-abdominal pressure and column of intestines. This is also demonstrated by Braune's Plate II and a coronal section by Ruedinger. In retropositions of the uterus the utero-vesical pouch is abnormally deep, the union between bladder and uterus being much below the internal os. (Braune's Atlas, Bellamy's translation, Fig. 7, Page 36.) The tissues binding the bladder to the

¹From the Transactions of the New York Obstetrical Society, April 18th, 1893.

anterior abdominal wall at the symphysis are so arranged as to admit of considerable upward movement of the organ, but giving it a fixed point at the symphysis, and in all movements of and injuries to the bladder this point remains fixed. This anatomical fact has so far been

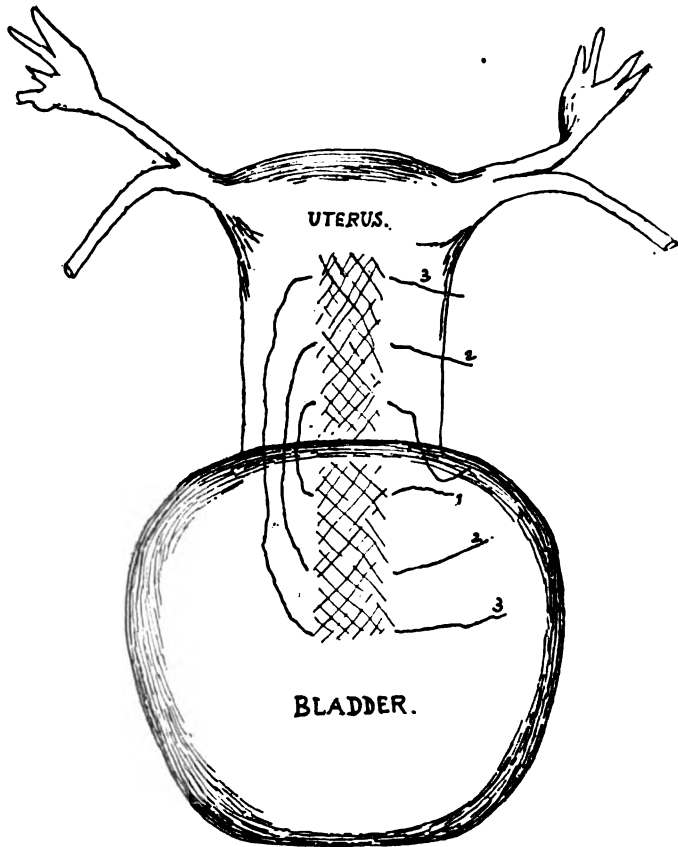


FIG. 1. SCARIFIED SURFACE AND SUTURES IN POSITION (SCHEMATIC).
BLADDER SHOWN RELATIVELY TOO LARGE.

overlooked. When coeliotomy is done to correct adherent or intractable acquired retropositions, usually some one of the various forms of ventro-fixation is adopted, and generally Leopold's method. Should pregnancy subsequently occur, the rule is that such ventro-fixed uteri go to full term, but some abort. Again, there are certain vaginæ so

short as to prevent raising the fundus so high. And in all cases there is formed a false band of greater or less length, for it is inconceivable that the uterus remains closely applied to the abdominal wall against the entire force of the intra-abdominal pressure. Therefore an operation is desirable which allows the uterus to follow the movements of the bladder, rising with that organ and descending when it is collapsed. For a certain amount of mobility in the uterus is imperative and no operation or instrument which fixes it immovable is rational. As the bladder

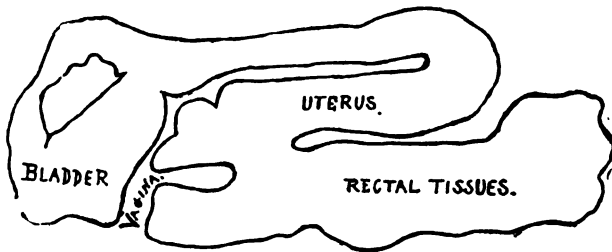


FIG. 2. RETROVERSION (WINCKEL). SHOWS LOW ATTACHMENT OF BLADDER TO CERVIX IN RETROPOSITIONS.

rises normally with pregnancy, that condition would not be interfered with by the proposed operation. In cases of short vagina, whenever the adnexa of both sides are removed, and in all other cases where now ventrofixation is used I advise the following operation.

The patient being in Trendelenburg's position, the incision should be carried well down to the pubic articulation. Any operative procedures indicated having been completed, it but remains to fasten the uterus up. For suture material I would not use silkworm gut because of its permanency, but silk or catgut. The bladder should be empty. The anterior surface of the uterus from its bladder junction to the level of the tubal openings should be scarified in the middle for a width of one-half inch. Beginning at a point from the posterior border of the symphysis not greater than an inch, the peritoneal surface of the bladder should also be gently scarified for a space equal to and opposite that on the uterus. The scarification on both bladder and uterus should be so done as to cause no bleeding. Even though the dimensions of the bladder be greater than those of the uterus so as to necessarily leave a portion of the bladder undenuded, it matters not. But as the contracted bladder about equals the uterus in length, it will not often happen that much surface on the bladder will be left unscarified. The suture should then be introduced with a curved

needle without cutting edge. Three or four sutures at most will suffice. These are to be all passed under the bladder peritoneum first, and then the lowest suture, under the uterine serosa and tied to one side. The same with the other sutures in turn. About half an inch apart will suffice to secure accurate coaptation. The sutures are tied in a flat knot and the ends cut short. The abdominal wound is closed in the usual way. A uterus fastened in this way does not tend to fall back with the increase in intra-abdominal pressure, and therefore there is no dragging on the sutures, but rather is the organ applied more closely by such efforts as vomiting, etc. The bladder should be kept fairly empty for two days, the urine being drawn every four hours. The accompanying rough drawings may indicate my meaning as to the suturing and denudation. The uterus is not fastened in a false position, but rather in an exaggerated normal position, one which it assumes naturally in correct relations of the organs. The vesico-uterine space is obliterated and not increased as in ventro-fixation, and no false band exists around which intestines may be caught. The scarification takes but a moment, and it is not necessary to make it in so regular a shape as in the diagram. I do not wish to convey the impression that the whole of the opposing surfaces are scarified, merely a strip on each.

There are two operations for retro-positions, namely, the methods of Drs. Polk and Wylie, which destroy that graceful curve through which the round ligaments approach the inguinal rings and tend to



FIG. 3.  FROZEN SECTION BY HEITZMANN. (ARCH. DES MENSCHEN WIEN. 1875.)

approximation of the cornua. Furthermore, they both, through tension, and so does Alexander's operation, cause the round ligaments to leave the cornua at an acute angle. Any conditions which drag together the cornua by tension on the round ligaments conduces to

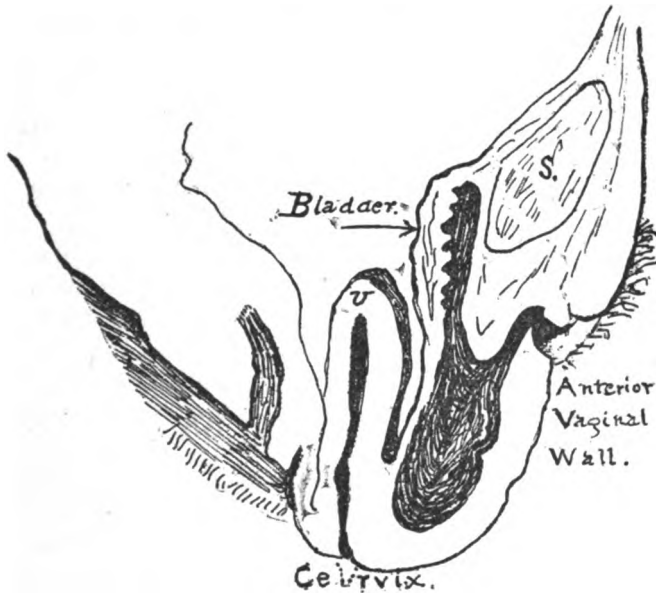


FIG. 4. FROZEN SECTION. INVERSION. (HART.) SHOWS FIXED POINT OF ATTACHMENT OF BLADDER TO SYMPHYSIS. U UTERUS. S SYMPHYSIS.

flexion and stricture of the tubes. Indeed, Dr. Polk has reported an occluding salpingitis resulting from this. I can not believe that these operations which so distort the uterus at its most essential point, can have other than a deterrent effect upon conception. Surely ventro-fixation has by fastening the uterus so high and immovable. Therefore I offer an operation which I believe will accomplish all that the others do and without their disadvantages. The slight union between uterus and bladder will suffice, for the organ is but in what I term an exaggerated normal position after my operation.

The operation is never to be performed as a substitute for primary Alexander's operation; that is, it is not advised when the retroposed uterus can be anteverted without a cœliotomy. But it is to be employed when, after the abdomen is opened, it is necessary to fix the uterus forwards. Therefore for retro-positions with adhesions or diseased

adnexa, cases in which Alexander's operation is positively contra-indicated, it is indicated. It is the preferable procedure where ventro-fixation, Wylie's, Polk's and similar operations are now performed. The union induced between bladder and uterus is very tender. But it is a well-known fact that even a fine filament of adhesion extending from the fundus to above the bladder, will maintain the uterus above the bladder even though stout traction be made from below. In other words, a very slight force is sufficient when applied to the uterus in its proper position. If this were not so, I very much doubt if Alexander's operation would be as successful as it is.

My operation also allows the bladder to be entirely emptied, which ventro-fixation does not do.

Vesical irritation is not to be feared, for, as I said, the uterus is merely in a normal position. Besides, vesical irritation is not a prominent symptom of those conditions where even the enlarged uterus rests on the bladder, as in pregnancy, fibroid, etc.

The case operated upon a few months back is perfectly free from any such trouble; but it is too soon to predict the ultimate result. It might be well to use only two or three catgut sutures instead of the silk. Union between scarified peritoneal surfaces takes place in a few hours, and even the most temporary suture material will suffice.

Possibly increased experience will demonstrate that it is inadvisable to extend the scarification and denudation so high on the two organs; that it will be sufficient to unite them to a point half way between fundus and internal os. Making a more intimate union might interfere with the growth of the upper segment of the uterus in case pregnancy supervened. But in the case tried, one in which I removed a large pyosalpinx, the other adnexa having been removed some years before for ovarian cyst, that objection was not tenable. I merely removed the pyosalpinx, released the retroflexed uterus and fastened it as I describe, in preference to doing any other operation.

As Freund says, "the proper place for the uterus is in the pelvic not the abdominal cavity." And as the organ naturally lies upon the bladder I have merely imitated nature.

A PORTABLE FRAME FOR SECURING THE TRENDLENBURG POSTURE.¹

BY GEORGE I. MCKELWAY, M. D.

Gynecologist to The Philadelphia Hospital.

I am not here to explain, defend or accuse the Trendelenburg posture, but simply to show a portable, light, convenient and efficient frame that I have devised for its procurement. The frame is so simple and so readily understood that a very few words and a very short time will suffice for its explanation and exhibition.

As you will see it is made largely of wood which is finished with a hard wood finish. This for the purpose of getting it as light as may be. It consists of three parallelograms of varying widths and lengths, so that one fits inside the other when the frame is folded, the three thus occupying only the depth of one. The outer frame is forty-seven and a-half inches long and twenty inches wide; the middle one is forty-two and a-half inches long and sixteen and three-eighth inches wide; the inner one is thirty-seven and three-quarter inches long and fourteen and three-eighth inches wide. The outer frame and the middle frame have one end piece in common around which they can both freely revolve as the wheel does around the hub. They are separated from each other on this hub by metal spools three-eighth inches wide. The inner and smaller parallelogram and the middle one have the same arrangement at the other end and are separated from each other by similar spools on each side. The spools are to keep the frames sufficiently apart so that the studs upon which the cover is secured to the frame shall not interfere with the folding of the frame. The wood is maple, three-quarters of an inch square, with the corners rounded. The hub pieces are likewise of maple but are round and are one inch in diameter. The outer and the inner parallelograms are braced at about their centers with brass braces about one-sixteenth by one-half inch. The middle frame upon which the weight of the body of the patient comes has two such braces five and one-half inches apart from center to center and between them is a slightly convex sheet of brass. This, when the frame is set up, supports the back of the patient just above the

¹ Read before The New York Obstetrical Society, Tuesday evening, April 18th, 1892.

patient's pelvis, and not only assists in supporting the patient but also takes some stress off from the cover.

Upon the inside of each piece of the inner frame is secured a strip of brass twenty-seven and three-quarter inches long, cut with ratchets for a part of its length, two inches apart, and having one ratchet at the upper extremity. Upon the square end of the outside frame is fixed a piece of metal in which these ratchets catch when the frame is set up, so as to hold it at any desired angle, and near them on the outside of the same pieces are two guard pieces so that these ratchets may not work from side to side or entirely escape from the frame. The parallelograms are braced at their corners, where such bracing is possible, with right-angled brass castings, and the hub pieces are bored for about four inches from each end, and in them is securely fastened steel rods serving as a spindle about which the revolving parts of the frame move. They also hold the different parts securely together.

For the purpose of securing the cover to the frames round headed studs are screwed into the wood at definite places. When the frame is to be carried, the straps, which you see, hold it together and also hold the cover into the concavity of the sheet of brass of the center frame.

The cover is made of a cotton material which is covered with rubber. As you can see this is thoroughly well made. The edges are turned down for two and one-half inches all around and it is braced by the same material at proper intervals. There are sewn to it perforated bits of leather which go on the studs on the frame to secure the cover properly to it, and the straps which hold the cover of the frame fit into places made for them on the cover and serve the purpose of strapping the patient's legs to the cover when it is applied to the frame. So much for the frame when it is to be carried.

Now when it is to be used: The cover is unstrapped from it and the other straps are removed. The frame is then put upon the table. Any ordinary table that is not narrower than twenty inches nor shorter than forty inches answers perfectly well. The frame is placed close to the side of the table upon which the operator stands and is secured to it by two ordinary clamps, placed at convenient distances. The frame being screwed to the table by the clamps, the center part is lifted and extended to its full length. Then the middle part is lifted in the same way and raised high enough that the ends of the center part may come within the guard pieces. Then, for convenience in putting on the cover, the ratchet is run down as far as it will go giving the most obtuse angle obtainable to the center and middle pieces. The

adjustment of the cover suggests itself, as of course the narrow end goes on the narrow frame and the wide end on the wide frame. A mistake can scarcely be made about putting on the cover. The straps are then put in the places provided for them, the longer straps to go about the calves and the shorter straps to the ankles. A pillow is put at the head end of the frame and it is then ready to receive the patient. When a greater or less elevation is desired comparatively little force applied at the extremity of the inner frame is sufficient to raise or lower it.

The advantages of this frame over other appliances of the sort are its absolute simplicity, its lightness and portability, its appearance and the fact that the cover has a surface of rubber so that it can be cleaned without the material shrinking each time, as the plain duck cover does, and the further fact that its cost should not be very great. I believe that the makers propose to supply it for twenty-two dollars.

I should have said that the parts are all interchangeable; that is, that the castings or the cover or the wood parts of any one frame will fit any other frame and, if any part becomes broken, it can be supplied without sending the frame again to the maker.

The weight of the frame is thirteen pounds; some of them weigh an ounce more and some an ounce less. They are made and for sale by Charles Lentz and Sons, Philadelphia. I thank you very much for your courtesy in giving me the opportunity to show it.

(Cuts of this table may be found on page 448, May number.)

SOME MOOTED POINTS IN GYNÆCOLOGICAL DIAGNOSIS.¹

BY JOHN ASPELL.

New York.

I shall detain you for a very brief space of time. I am thoroughly aware that it is hardly in my power to present men of your experience with anything new. I shall confine myself therefore to narrating some few cases which have come under my observation as a gynæcologist, and which exhibit features not generally found in the course of daily practice. As what we know by gynæcology requires mainly palpation, and affords aspects that in nearly every case fall within the domain of

Read before The New York Obstetrical Society, May 2nd, 1893.

either touch or vision, no one can affix a limit to the advancement and development which it may achieve in these days which are so rich in mechanical appliances and discoveries. Cleanliness and the knife work wonders. Add to these a complete self-surrender to the chances placed in the way of a gynæcologist and it is no exaggeration to state that many of the shortcomings which must be laid at the door of careless and unskilled obstetrics will rapidly disappear.

As no two physicians meet with exactly identical experience I feel safe in saying that perhaps it has been my lot to encounter in the treatment of the many cases which I have seen either at private homes or in the hospital symptoms and developments a little bit out of the usual course. No one can overstate the advantages that accrue from a comparison of experience in gynæcological surgery. In a general way I may say this, that a great danger lies in confounding lesions that are remediable by palliative measures with those that really obstruct abnormally the normal health, requiring more decided treatment. The danger is as great in the too conservative as in the too radical view. It is common enough to find far advanced disease with very modest symptoms, and a grave lesion may be discovered accidentally while searching for a lesser malady. Different patients may present similar symptoms in dissimilar affections. With the surgeon the importance of some may take precedence over other symptoms. What might be deemed grounds for surgical interference by one might be considered not so formidable by another. To the patient, difference in time lost or gained is nearly always to be considered. This is especially so in what we call "walking" cases, patients, that is, who bring their ailments from one hospital to another, or from one doctor to another, and who by reason of their itinerancy are able to compare notes and pass upon the respective merits of different surgeons. This frequently reiterated experience gives them at least a superficial knowledge of the various methods of treatment. This very large class of unrelieved sufferers evidently makes an appeal to our pity and imposes upon us the necessity of careful and conscientious treatment.

The present status of surgery has revealed to us the significance of minor lesions and impediments in the way of proper functional performances of the organs of the pelvis. The commonest complaint in an otherwise healthy woman is perhaps sterility. This may be due to over-exaggerated ante flexion. We waive for the nonce mere pathological considerations and would repeat that because ante flexion exists in a patient presenting such a symptom the ante flexion is not always the

why and the wherefore of the symptom. While the value of dilatation may be commended where there is an apparent obstruction, yet perseverance in mechanical treatment will open the way to septic introduction unless great care is given, or even with care an hypertrophy of the lining membrane followed by hyperæsthesia and dysmenorrhœa is apt to result.

The great object of all surgery as well as of all medicine is to remove one disorder without generating another. Our success lies in a careful study of the causes of interruptions in conceptions. This is not so difficult as, on the face of it, it appears. Some of the factors that make up the problem are injuries to the cervix, constitutional taints, accidents, obesity, the inability of a disabled heart to support a double circulation, the influence of the nervous system, and peritoneal adhesions. A physical examination of the chest is the first impulse, and it is rewarded in either detecting the cause or in a valuable exclusion. In my limited experience where the cause was traced to the heart, mitral direct and regurgitant murmurs alone existed. One frail and nervous woman went as far as the twenty-eighth week four times, expelled an hydatiform mole at the second month, and is now pregnant again in her third month.

Occasionally the question of hyperemesis complicating pregnancy is considered without decided advances as to its pathology. There is some speculation as to its nervous origin, mechanical position of the uterus, or adhesions giving rise to it. No one has ventured as far as I know on an abdominal section to learn the influence of adhesions in such cases. It is not too bold a suggestion. We know that a secondary cœliotomy has relieved many patients of reflex irritations wherein the offending cause has been an adhesion. The following case may have some interest in this bearing. A woman thirty-six years of age, of full habit and vigor, noticed a rectal tenesmus coming on insidiously for some days. Thinking there might be some irritating cause in the rectum she helped herself to a cathartic and low enema. The distress was increased. Although there was no interruption of menstrual regularity she was in her third month of pregnancy, and there were distinct evidences of old salpingeal trouble on the right side. She told me in her story that a similar attack occurred several years before but ceased as soon as she aborted. Therefore she was anxious to learn if she was pregnant again. Delaying my answer by requesting another examination I found a violent rectal tenesmus could be brought on by lifting the gravid uterus in the pelvis. A rectal enema had the same effect.

There was reason for believing here that the offending cause was on the right side, that it consisted in some relation between the cœcum or ilium, near the ileo-cæcal valve and the uterus or adnexa on that side. She spoiled the illusion by taking advantage of my absence to bring about an abortion. Here equilibrium was soon restored.

I shall simply mention in passing that hysteria and hystero-epilipsy have a peculiar way of simulating eclampsia. The most pronounced case I have seen was a patient who had some albumen in her urine, which was not altogether unexpected but not enough to shake the evidences in the nervous origin of the spasms.

Meeting with such cases has steadily forced upon my mind the conviction that abortion may be frequently unnecessarily practiced. Medicine must work in harmony with nature's law, and since the last and most violent effort of nature in pregnancy is expulsion of the fœtus, abortion, I logically conclude, should not be resorted to except as a final and inevitable measure. I have also thought that the proudest distinction of an obstetrician would be to so assist nature as to render parturition in a large majority of difficult cases a successful achievement. I am looking forward to the day when some of our great and distinguished surgeons, (because I believe that surgery will be the chief winner in this victory), will come before the world with the discovery that will be a blessing to maternity, to the child, and an added glory to the medical profession.

REPORT OF OPERATIONS FOR MOVABLE KIDNEY.¹

BY G. M. EDEBOHLS, M. D.

Bilateral Nephrorrhaphy.

The first patient was one whose case (Case XI) he had already published in detail in his recent paper on Movable Kidney (*American Journal of the Medical Sciences, March and April, 1893.*) He presented her this evening for the purpose of demonstrating the permanent fixation of both kidneys in their new positions.

The second patient was a widow of thirty-nine, who had never conceived and who had for more than ten years past suffered from the

¹ From the Transactions of The New York Obstetrical Society, April 18th, 1893.

usual symptoms associated with movable kidney. During all that time she had received much and varied treatment, chiefly directed to the genital organs, without any relief, the mobility of her kidneys passing undetected until she came under the care of Dr. Edebohls.

Her most annoying symptoms were apparently connected with the bladder, consisting of frequent attacks of painful micturition, with sudden interruptions of the flow, and occasional complete suppression of urine, generally lasting for from twelve to fifteen hours. The bladder although tender on pressure, gave no other evidence of disease on careful examination. The suppression of urine was interpreted as the result of kinking or torsion of the ureters due to the mobility of the kidneys. The patient had found out for herself that the only way to relieve it was to assume the recumbent position, when a free flow of urine soon followed. During a week of observation preceding operation her urine was examined daily and was invariably found to contain albumen. No casts, however, were discovered.

The right kidney was movable about twelve and the left some ten centimetres, in a downward direction, so that the hands, one pressing from the hypochondrium backwards and the other from the lumbar region forwards, could easily be made to meet above the upper pole of either kidney, between that organ and the free border of the ribs. The kidneys were thus palpable in their entirety and were found normal in shape and size.

Double nephrorrhaphy was performed on March 10, 1893, both kidneys being operated upon at the same sitting.

The albuminuria persisted for ten days following operation and then disappeared, not again to return. The wilfulness of the patient, sitting up in bed repeatedly during the first six days after operation, interfered to a slight extent with wound healing but did not nullify the result as far as anchorage of the kidneys was concerned, both of which are to-night firmly moored to the lumbar scars.

The symptoms, nervous, gastro-intestinal, genital, vesical and urinary, which have existed for so many years have, nearly all of them, entirely disappeared since operation, and the delighted patient considers herself perfectly well.

Bilateral Nephrorrhaphy

performed upon the patient, a girl of twenty-six, whom he had presented to the Society at its last meeting, and in whom, as the members who examined her will recall, the right kidney was displaced some

fifteen and the left some thirteen centimetres downward, both organs being excessively movable.

The case was of interest because the patient, an otherwise healthy country girl, with no nonsense or hysteria about her, presented an array of symptoms, such as dysmenorrhœa, pains in left ovarian region, general pelvic distress and intolerable bearing down sensations which most gynæcologists would look upon as probably indicating disease in the genital sphere. Yet on careful examination the genital organs were found absolutely normal, and *all* her symptoms were interpreted as due to the movable kidneys.

Double nephrorrhaphy was made on April 7, both kidneys being sutured at the same sitting. Recovery had been uneventful; it was as yet too early, however, to speak of therapeutic results.

Dr. EDEBOHLS next showed a patient, a girl of twenty, upon whom he had operated for

Movable Right Kidney and Endometritis Associated with Menstrual Epilepsy,

on January 6th, 1893, performing curettage of the uterus and nephrorrhaphy at the same sitting, and whose case he had outlined in the paper above alluded to (Case XVIII).

For two years previous to coming under his care she had suffered from dysmenorrhœa and hystero-epilepsy during the whole of each menstrual period, the flow occurring every four weeks and lasting five days. Since the operation she had had three periods. In none of them did the hystero-epilepsy recur and in but one did she experience dysmenorrhœa.

The curious feature of the case was that the left kidney, which at the time of operation was in its normal situation, was now displaced far downwards, at least fifteen centimetres, towards the pelvis, while the right kidney remained securely anchored where Dr. Edebohls had fixed it. The patient had, for some reason not perfectly clear to him, grown very thin since operation, and absorption of the perineal fat no doubt explained the excessive and rapidly acquired mobility of the left kidney.

He had been able to relieve many patients with minor degrees of movable kidney by ordering a well-fitting and tight corset, the pressure of which crowded the displaced organ into place. This was not a case, however, that could be relieved in that way, the kidney being below the waist line of the corset, the tightening of which would therefore

crowd the organ further downward rather than upward to its normal situation.

Dr. EDEBOHLS also presented a patient, a married woman of twenty, with

Mobility of Both Kidneys, Endometritis and Catarrhal Salpingitis

on whom he proposed first to perform a double nephrorrhaphy, as he considered most, if not all, of her symptoms due to the movable kidneys, and to follow the operation, if necessary, by treatment directed to the uterus and tubes.

He showed the patient mainly for the purpose of demonstrating what enlarged experience had taught him was the best method of examining for movable kidney. This was to examine with the patient standing, the examiner sitting at her right side. After the right kidney had been palpated, the examiner, without changing his or the patient's position, reached around her in front and behind and felt for the left kidney.

Both in this patient and in the one presented at the last meeting, neither kidney could be felt with the patient lying on the back. Yet on assuming the erect attitude, the four kidneys fell out of their places to various distances ranging from eight to twenty centimetres.

Dr. EDEBOHLS next presented a recent device of his :

An Air-Cushion to Facilitate Nephrorrhaphy.

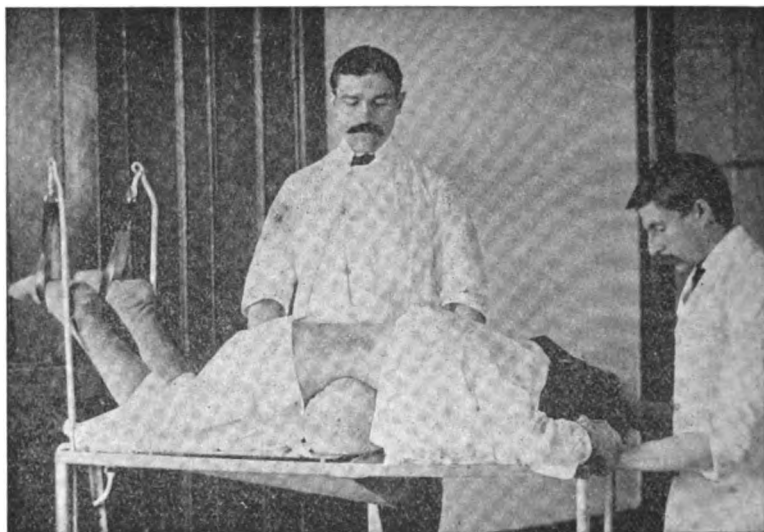
In his paper, already alluded to, on "Movable Kidney," he had advised the performance of nephrorrhaphy with the patient in Sims' position. Further experience with the operation had taught him a preferable position; especially so when both kidneys were to be operated upon at the same sitting. He had already insisted upon the fact that the one thing which made the operation easy or difficult was the proper or improper position of the cushions placed between the table and the patient's abdomen with a view to crowding the viscera, and on top of them the kidney, towards the site of operation in the lumbar region. The proper placing of these cushions and their maintainance in position was not always an easy matter, and frequently the operation had to be interrupted to readjust them.

He had overcome all these difficulties by operating with the patient lying flat upon the abdomen and anterior surface of the chest upon the table. After the lumbar region had been prepared for operation by

washing, the patient was lifted sufficiently to allow the cylindrical air-cushion shown to be placed transversely across the table beneath her abdomen. The air pressure crowded the abdominal viscera towards the lumbar regions, carrying the wandering kidney or kidneys back to their normal situation.

The air-cushion was a perfect cylinder of rubber, twelve inches long by eight inches in diameter, and inflated by a foot-ball valve and key, the valve being secured in the centre of one head of the cylinder. Any manufacturer of rubber goods could make one, or J. Reynders & Co., 303 Fourth Avenue, New York, would supply them.

The maintainance of anesthesia was easy in the position described, the face being turned to one side and the elevation of the abdomen upon the cushion freeing the chest from pressure by the table.



In performing the operation on the Edebohls table the anterior surface of the thighs rested upon the table, while the legs and feet were suspended by means of the Edebohls leg-holders. In using a longer table the entire lower extremities lie upon the table. The position should prove a good one also for other operations upon the kidney, as well as for sacral proctectomy or hysterectomy, and in his next case of either of the latter he proposed to give it a trial.

The use of this cushion had also enabled Dr. Edebohls to improve upon the technique of the operation itself. Instead of passing the

sutures through the kidney in the depths of the wound, he now took the kidney to be operated upon out through the lumbar incision, and thus having free access to the entire organ he was able to do much more accurate work, splitting and reflecting the capsula propria to the exact extent required and in the exact situation desired. He then passed his sutures, to the number of five generally, through the kidney, after which the kidney was replaced in the body and the ends of the kidney sutures passed on each side through the muscles and fascia. Previous to tying them he had the cushion taken away, so as to remove the tension upon the lips of the lumbar incision and permit of the easy approximation of the deep portions of the wound, so that cutting of the buried sutures through the kidney substance by reason of too great tension was avoided. He was perfectly satisfied both with the technique and the results of nephrorrhaphy as he now practiced it. He had thus far operated upon twenty-four cases, in three of them fastening both kidneys at the same sitting.

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EDITORIAL.

MOVABLE KIDNEY AS A FACTOR IN GYNÆCOLOGICAL SYMPTOMS.

We publish this month among the original communications an excerpt from the Transactions of the New York Obstetrical Society of April 18th, 1893, anent the condition of movable kidney and a report of a number of cases with their appropriate operation by Dr. Edebohls.

It may safely be said that, judged by the claims proffered in its behalf by its recent sponsors, its importance as a factor in gynæcological symptoms—or what have heretofore appeared to be such—is very great, and owing to the strong advocacy and brilliant and painstaking work of several prominent surgeons, above all by Dr. Edebohls, no subject is fresher or more *forward* in the minds of American gynæcologists at the present time. Dr. Edebohls has inseparably associated his name with this pathological condition and its relief by the large number of the cases he has collected and operated upon, by the excellent results of his published statistics, and by the dexterity and dispatch with which he operates for its relief.

As to the true importance of the condition of movable kidney as an active factor in producing symptoms simulating and often referred formerly to pathological states of the pelvic organs, professional opinion is divided. Perhaps it would be more correct to say that it has as yet expressed no opinion at all, and this attitude is connected and con-

sonant with the greatest interest. It means expectancy and investigation. The immediate effect of Dr. Edebohls' agitation of this subject will undoubtedly be the highly beneficial one of causing many men to be more careful of forming diagnoses of pelvic disease upon subjective symptoms alone when the bi-manual touch does not convey clearly to their mind an adequate cause for these symptoms. This mode of practising has not, we fear, been altogether uncommon. Bimanual touch outside of the pelvis is still more uncommon. Indeed, but a few months ago it was said by a general consultant of brilliant reputation that movable kidney was so rare that he had as a matter of curiosity requested the pathologist at Bellevue Hospital to make a careful search in all his cases for this condition and that this inquiry resulted in finding but two or three in a thousand autopsies. And yet it has been Dr. Edebohls' experience to find it very frequently and he has demonstrated the condition in a number of cases before the Obstetric Section of the Academy of Medicine. It is the old story of Columbus and the egg, the condition was not noted because it had not been properly sought. The two classes of symptoms reflex and direct remain to be more fully investigated, but we can already say that the condition may exist without necessarily being accompanied by any symptoms at all. This of course does not prove that the condition may not be a constant menace and we await with much interest the testimony which will enable us to decide whether the operation should be done in all cases, in occasional cases presenting symptoms of discomfort, or only when the symptoms are urgent and the patient in danger.

REVIEW.

THE DISEASES AND DEFORMITIES OF THE FŒTUS. An Attempt towards a System of Anti-Natal Pathology by J. W. Ballantyne, M. D., F. R. C. P. E., F. R. S. E. Vol. I. Edinburgh, Oliver & Boyd.

The author of this work has undertaken a task beset with many and obvious difficulties, yet the volume before us gives promise of gratifying success. In the introductory chapters he calls attention to the general lack of interest in the study of foetal life and health and the meagreness of existing teachings on the subject. Even the physiology

of intra-uterine life has not kept pace with the progress in most other and more practical departments of obstetric knowledge. In proof of the importance of the subject the author alludes to the high foetal mortality and to the large proportion of deaths during the first months of infancy, many of which may justly be ascribed to congenital disease. While during the last fifty years the expectation of life has been greatly increased for the adult, there has been no corresponding gain for the earlier months of life. Stress is laid upon the importance of utilizing the opportunities which constantly present themselves to every practitioner for advancing this department of knowledge. Specimens illustrating foetal disease and deformity should be carefully preserved and studied. Still-born infants and new born children dying within the first few weeks of life afford a means of observation which has attracted too little attention.

Said Dr. Stokes more than fifty years ago: "I believe that any one who has the opportunity of dissecting a great many still-born children or those who die immediately after birth would, by examining the state of different cavities and publishing the results of his examinations, earn for himself very great reputation." The same remark might apply with even more force to the examination of the products of early abortions. Several pages are devoted to methods of investigation including a scheme for case-taking such as the author has used in his researches. The plan of study includes the external appearance of the foetus, the internal appearance gross and microscopic, and the chemical character of the fluids together with the examination of the foetal adnexa, the obstetrical circumstances of the case and the maternal and paternal history. Then follows a somewhat extended historical sketch of the subject of foetal pathology. The last nine chapters of the present volume are occupied with the subjects: general dropsy, elephantiasis and general foetal obesity with dropsy. The work thus far bears evidence of a vast amount of pains-taking research and the results promise to be of more practical interest and value than at first appears. The mechanical execution of the book including a number of full-page plates is of the highest order.

C. J.

CORRESPONDENCE.

To the Editors of the New York Journal of Gynecology and Obstetrics:

GENTLEMEN: While I desire to add my tribute to the memory of Dr. C. C. Lee who was a Christian gentleman, courteous and true in every relation, social and professional, and whose record as a gynecologist was brilliant, I must correct an error in history that occurs in the In Memoriam by Dr. T. A. Emmet in your June issue.

Dr. Emmet states that Dr. Lee, "after a continuous service of years, became eventually a member of the Board of Surgeons (of the Woman's Hospital) as the successor of Dr. Peaslee."

If Dr. Emmet had read the Twenty-Third Annual Report of the Board of Governors of the Woman's Hospital for the year ending November 1st, 1878, he would have found immediately after the minute concerning the death of Dr. E. R. Peaslee, p. 36, the following:

"Dr. Nathan Bozeman was elected to fill the vacancy created by the death of Dr. Peaslee.

"The Board of Governors regret that Dr. Fordyce Barker has found it necessary to retire from active participation in the duties of the Hospital, though still retained upon its consulting Board.

"Dr. Emil Noeggerath has been elected to the position made vacant by his resignation.

"With the opening of both Pavilions it has been found necessary to increase the staff of Attending Surgeons from four to six, and Dr. James B. Hunter and Dr. Charles C. Lee have been elected to fill the positions thus created."

Yours respectfully,

NATHAN BOZEMAN.

9 West 31st Street. June 13th, 1893.

RECENT FOREIGN LITERATURE.

LUDWIG, E. *Über Pessarien.* 35 cents.

LUTAND, A. *La stérilité chez la femme et son traitement médico-chirurgical.* 2e ed. avec. 47 fig. \$1.00.

MALAPERT, M., *Du manuel opératoire de l'hystérectomie vaginale.* 1.10.

WINCKEL, FRANZ v., *Lehrbuch der Geburtshuelfe.* Mit 206 Holzschn. 2te verbesserte auflage. \$6.00.

These books may be obtained from L. Hydel, 212 East 50th St., New York. Delivered in New York at the prices above stated.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

· Stated Meeting, April 18, 1893.

GEORGE TUCKER HARRISON, M. D., President, in the Chair.

A Portable Operating Frame for the Trendelenburg Position.

Dr. GEORGE I. MCKELWAY of Philadelphia, present by invitation, exhibited a portable frame which he had devised for use in operating with the Trendelenburg posture. (See page 583.)

DISCUSSION.

Dr. G. M. EDEBOHLS said he was very much pleased with this very ingenious contrivance for obtaining the Trendelenburg position on any table. The subject was of especial interest in this city because it was here that this position was first used to any great extent in this country. He could not conceive of any frame which would be better adapted for securing this position on an ordinary table, and there is certainly need for a portable arrangement of this kind. He wished to compliment Dr. McKelway on the great ingenuity displayed in making the construction so simple without lessening the utility of the apparatus.

Dr. A. H. BUCKMASTER said that he wished to sound a note of warning in regard to the use of the Trendelenburg posture. He observed that some of the operators in using this position neglected to completely cover the intestines either with a sponge or with gauze. The neglect of this precaution not only nullifies the benefit to be derived from the position but adds a great danger—for the position then favors the escape of blood and deleterious fluids among the intestines and these fluids gravitate up under the diaphragm where it is impossible to remove them without evisceration.

Another point to be borne in mind in laparotomy for secondary hemorrhage was that we may find but little blood in the pelvis and yet a great deal may be concealed among the intestines under the diaphragm. For this reason the foot of the bed should never be elevated in the case of a patient suffering from hemorrhage.

It is also a question whether a patient may not in some cases be free from hemorrhage while the pelvis is elevated and yet bleed freely when it assumes its normal position.

Dr. W. M. POLK said that the point just raised by Dr. Buckmaster about the danger of concealed hemorrhage is unquestionably a very important one, as he had learned only yesterday to his great sorrow. While in the Trendelenburg posture, there appeared in his case to be only a clean wound surface, but on lowering the table he found to his surprise and chagrin such a persistent oozing of blood, chiefly from the meso-rectum and from the posterior face of the uterus, that he was compelled to employ a number of ligatures and ultimately to pack the whole of the pelvis with gauze.

Regarding the frame just exhibited, he said that in the presence of so many gentlemen whose names are connected with tables designed especially for facilitating the use of the Trendelenburg posture he hesitated to speak against these devices, yet he had found during a year of persistent use of the Trendelenburg posture, that a plain board, two feet wide, well cleaned and elevated in any convenient way, had answered every purpose and seemed to him to possess all the advantages which had been claimed for these more elaborate devices.

Report of Operations for Movable Kidney.

Dr. G. M. EDEBOHLS presented several patients. (see page 588.)

Malignant Adenoma of the Uterus. Vaginal Hysterectomy.— Recovery.

Dr. H. C. COE exhibited a specimen with the following history:

The patient, æt. sixty-two, passed the menopause ten years ago and always enjoyed good health, with no history of any uterine trouble, until ten months ago, when she began to have slight irregular hemorrhages, which have recently become more profuse. There has never been either pelvic pain or any foul discharge. Five weeks ago the uterine cavity was curetted, several fragments of soft, friable tissue being removed, which showed under the microscope a general adenomatous structure, with a few groups of epithelioid cells. From the history of the case and the result of the microscopical examination I felt justified in making the diagnosis of "malignant adenoma" (adeno-

carcinoma), two cases of which I have previously reported to the Society, presenting the uteri which were successfully removed. Dr. Thomas saw the patient with me, confirmed the diagnosis, and agreed with me as to advisability of performing total extirpation. The operation was performed in the usual manner, ligatures being used which were applied with considerable difficulty, owing to the narrowness of the vagina. The diagnosis was confirmed by the finding of a circumscribed growth the size of a twenty-five-cent piece at the fundus uteri, which had only invaded the superficial muscular layer. The prognosis for a permanent cure is therefore excellent.

The patient made an uneventful recovery, though considerable solicitude was felt about her on account of a cardiac complication.

DISCUSSION.

Dr. A. PALMER DUDLEY said he had had two cases of adenoma of the uterus in the past few months, and he had removed both of them successfully by vaginal hysterectomy.

Multiple Fibroid of Uterus With Double Hydro-Salpinx.

Dr. H. M. SIMS presented such a specimen :

Mrs. S. consulted me five years ago for menorrhagia and constant pains over both ovarian regions. At that time I found she had considerable enlargement of the uterus with salpingitis. I advised removal of the tubes and ovaries to arrest the growth of the uterus and stop the hemorrhages. I had not seen the patient again until two weeks ago when I was hurriedly summoned early one morning and found the patient in the most agonizing pain, her bowels not having moved for several days. I found the uterus had grown to five or six times its former size, was jammed firmly in the lower part of the pelvis, and was immovable. On each side could be felt a fluid mass which I thought was part of the tumor. I advised an operation, which was performed on the following morning. The fluid mass on each side proved to be a large hydro-salpinx, and containing about a half a pint of clear fluid. The adhesion of the tubes were universal, and were firmly wedged between the uterus and the walls of the pelvis, making such firm pressure on the sigmoid flexure that it rendered a movement of the bowels next to impossible. A rubber ligature was placed about the uterus at a point two-thirds distance from the fundus. All

above the ligature was amputated thus leaving plenty of room for the completion of the total extirpation of the organ. The patient's age was forty. The weight of the tumor was about seven pounds. Recovered nicely from the operation and bids fair to recover perfect health.

Dr. SIMS also presented a case of

An Abnormally Long Fallopian Tube.

Mrs. W. had her first child eight months ago. Ever since her confinement complains of constant backache and severe dysmenorrhœa. I diagnosed salpingitis with prolapsed left tube with adhesions. The mass could be readily felt in Douglas' cul-de-sac. Operation three days ago. Tube found enlarged—very adherent and was flexed on itself like an S hook. I was greatly surprised at its abnormal length—the distance from the left cornu of the uterus to the fimbriated extremity of the tube being nearly eight inches. Not a bad symptom since operation.

Dr. A. B. TUCKER reported a case and presented a specimen of

Fibroid Cyst on Posterior Surface of Uterus. Operation.

Patient forty-nine years of age. Widow fifteen years. She has three children, youngest nineteen years old. Ten years ago she noticed a lump in lower portion of abdomen, this has increased steadily in size until lately when it has grown much more rapidly. It has been a great inconvenience, but has not given her much pain until about three weeks ago she was taken with violent pain over the lower part of her abdomen, nausea. The patient had consulted me before for some slight gastric trouble, but I had never had an opportunity to examine her abdomen until her last attack and was much surprised to find the condition I did. Upon placing my hand upon the abdomen I found a tumor round and regular in shape, seemingly continuous with the uterus, which extended to the umbilicus. She would allow no examination per vaginam.

She had a temperature of 103° , pulse 120, the former came down to about 100° , where it has remained up to the operation.

Her pulse has never been below 96. per minute. I sent her to St. Elizabeth's, and Saturday, April 15th, after etherizing and placing the patient in Trendelenburg's posture I removed the tumor shown by the flap method advocated and practiced by Goffe of New York. I got

her bowels moved within twenty-four hours by using magnesia citrate. Yesterday she developed a temperature of 103° , which fell after dilating the cervix.

Dr. TUCKER also presented a specimen of

Double Pyo-Salpingitis and Abscess of Right Ovary.

Patient is a young woman twenty-one years of age. Has one child six years old. Two years ago she gave birth to a still-born child attended by myself. Her recovery then was uneventful, no rise of temperature or increase of pulse rate, and she was around in ten days time. For the last eighteen months she has had pain in both inguinal regions. Painful menstruation. I have seen her only twice during that time or in fact since the birth of her last child two years ago. On April 8th I was called to see her and found she had a temperature of 102° , pulse 120, and complaining of pain, especially in left inguinal region. I advised her to go to the Polyclinic which she did that night, and I operated next day. Upon examination per vaginam, the left ovary and tube were plainly felt, the tube being much enlarged and adherent. She was so sensitive I could not find the right. I diagnosed pyo-salpingitis. When I was ready to operate I took her temperature and found it 102.5 , pulse 130. I opened the abdominal cavity and first found the right tube and ovary adherent to the posterior surface of uterus, nearly as high as the fundus; the adhesions were very dense. After bringing the tube and ovary to the opening I found pus oozing so I put some absorbent cotton, wrung out of a 1-5000 bi chloride solution to catch it. I then brought the left tube up. The ovary was so deeply buried in the broad ligament I could not get it out without causing considerable hemorrhage, and as it did not seem much enlarged I left it. I found pus oozing from a point where the adhesions had been most dense. I used catgut ligature on both tubes. After removing both tubes and the right ovary, I flushed out the cavity thoroughly and packed the cavity with iodoform-gauze. The patient made an uninterrupted recovery, her temperature falling in a few hours. I moved her bowels by enema within twelve hours.

DISCUSSION.

Dr. DUDLEY said he was very glad that this method of operating was being tried by others, for he thought it had certain merits which should be tested before total extirpation of the uterus was advocated and this one entirely condemned. In his opinion total extirpation is

not always necessary; if the stump be covered with a flap and only enough cervical tissue left to maintain the continuity of the vagina and its attachments, the patient will recover just as surely as after a total extirpation. But after doing this operation one point should always be borne in mind—viz: that there will be some secretion from the stump of the cervix, possibly some suppuration of the mucous lining, and therefore when the temperature rises it means that there is irritation about the stump. The patient should then be placed in the Sims position and the remainder of the cervix dilated so as to allow of the escape of any accumulated fluid. There is no danger whatever attendant upon this procedure.

Dr. TUCKER remarked that he had dilated the cervix in his case after the operation and had found no secretion whatever, yet the patient's temperature fell after the dilatation.

Dr. W. M. POLK asked what was the object of leaving any part of the cervix and taking the chance of suppuration. At present the issue is quite sharply drawn between complete and incomplete extirpation, and it was a matter of importance to settle this question definitely.

Dr. DUDLEY said that his only object in advocating this method was that it seemed better to leave the continuity of the vagina intact, and to cover the small portion of cervix with peritoneum and a portion of the first layer of the uterine tissue so as to guard against intestinal adhesion. In the Transactions of this Society there may be found reports of cases where such accidents have occurred and led to a fatal termination. If the small portion of the stump be covered with peritoneum taken from the anterior wall of the uterus, there is only one row of fine catgut sutures left. He did not think this method of operating introduced any additional risk, and it certainly seemed to him to possess certain distinct advantages.

Dr. POLK said that the closing remark of the last speaker showed that he was not aware that in the operation of complete extirpation only a peritoneal surface is left. It is if anything more easy to secure this than in the flap operation. The continuity of the vagina is affected to so small a degree in complete extirpation and is so quickly repaired, that he did not think this constituted any great objection to the operation. In complete extirpation you remove the cervix at the vaginal junction and leave therefore a comparatively small opening, which is easily filled in by turning in the tissues which have been stripped down from the lower segment of the outer surface of the uterus. The supports of the vagina are in no way influenced by

complete extirpation—the attachments of the broad ligaments and even of the utero-sacral ligaments are preserved, because the circumferential incision is begun above the basic line of the broad ligaments and above the attachments of the utero-sacral ligaments, and these being turned in become adherent around the free margin of the vagina, which is left free by taking out the cervix. Practically then the contour is as good as before the operation; there is no shortening of the vagina.

Having now disposed of the advantages claimed for the operation, he wished to criticise any procedure which made it necessary to provide for the escape of purulent material two or three days after the operation. This in itself showed the operation to be imperfect, yet such a provision seemed to be absolutely necessary in the method described by Dr. Dudley, and our knowledge of the infecting influence of the cervical tissue would lead us to expect such a result. This in itself should be sufficient to condemn the operation.

Dr. J. R. GOFFE said, regarding the question of *secondary interference*, that the criticism of the preceding speaker seemed to him well taken; it was certainly a weak point in the operation. He had recognized this himself and had sought for a method by which it might be avoided. Recently Dr. Heywood Smith, of London, had conceived the idea of ligating the uterine arteries in the broad ligaments instead of transfixing and ligating the cervix, and dissecting off the peritoneal flap anteriorly and posteriorly as already described. Dr. Baer, of Philadelphia, had also operated in this manner and claimed it as an original procedure. This improvement in the operation he thought made it an ideal one. He considered this flap operation to be preferable to total extirpation in that it obviates any possibility of adhesion of raw surfaces. The time of operation is somewhat shortened, and the condition after operation is better. The objection that the cervical stump may break down and become cancerous is a purely theoretical one. The more reasonable inference that cessation of function will cause atrophy is what actually does occur. The claim of superiority that the operation makes is that it is the neatest and most surgical method of disposing of the redundant tissue that remains after removal of the tumor, and that it restores the parts more perfectly than an other method to their proper relations in the pelvis.

Dr. POLK, in answer to several questions from the President, said that the time of operating ought not to be essentially different in the two methods, for it is simply a question of whether the incision is

through the cervix or through the cervico-vaginal junction, and this should not make a difference in time of more than two or three minutes. He had performed the operation twenty-seven or twenty-eight times, and the average duration of the operation was one hour. The ligation of the uterine artery is practically the same in the two operations, and therefore there should not be any more risk of wounding the ureter in one than in the other operation.

Dr. A. F. CURRIER thought that the advantages claimed for incomplete removal were advantages only in theory. Several operations had been reported where the vaginal portion of the cervix was left, and within a few months this portion had come away of itself. This answered the assertion that the pelvic roof was firmer when the vaginal portion of the cervix was not removed. He observed one of his patients for months after complete extirpation, had carefully studied the condition of the pelvic roof, and failed to see that the conformation of the vagina offered any of the objections which had been alleged. It was very much like the vagina of old age in which senile changes had proceeded normally.

Dr. RALPH WALDO presented some Australian carded wool which he advocated as an improved material for use in making vaginal tampons.

Material for Vaginal Tampons.

About two years ago while going through the Botany Worsted Mills my attention was attracted to the material I present to you; and on inquiry I found that it was combed and carded Australian wool. Since then it has proved to be the best material I have ever used for making vaginal tampons. It is as fine and non-irritating as absorbent cotton, is hygroscopic, and retains its resiliency when wet with a dressing or discharges.

Due to the fact that there are no sudden changes in temperature in Australia it is possible to grow a wool with a very fine fibre. A number of times the same sheep have been brought to this country and in a very few years the wool becomes coarse. Combed wool is much better than uncombed because no short pieces are left to irritate.

Messrs. Van Horn and Allison of Park Avenue, corner Forty-first Street, have consented to keep this on sale.

Dr. MUNDÉ said that he had used this material during the past year, and although the tampons made with it were not quite so neat in appearance as those made from good absorbent cotton, they possess all those properties which are most desirable in vaginal tampons.

Supra-Vaginal Elongation of the Cervix Uteri, with Abnormal Distribution of the Liquor Amnii in Pregnancy.

Dr. C. T. ADAMS read a paper with this title. (See page 574.)

DISCUSSION.

Dr. EDEBOHLS said that he had not met with this condition associated with pregnancy, but hypertrophy, elongation, and thickening of the supra-vaginal cervix is one of the most frequent conditions encountered by the gynæcologist. In some cases it is the result of endometritis, especially of the lower segment of the uterus and of the cervix; in the majority of cases, however, it means an abnormal development, and this is most probably the etiology in the cases reported in the paper. In the case detailed in the paper, menstruation was scanty, infrequent, and irregular, there was a small fundus uteri and an ante flexion—all features which are associated with imperfect development of the uterus. These uteri are not so likely to become pregnant as those better developed, and hence it is not so common to find pregnancy and hypertrophic elongation of the supra-vaginal cervix associated. He would take exception however to the author's statement that there was an abnormal distribution of the liquor amnii; it was rather that the results obtained by bi-manual palpation were deceptive. The liquor amnii fills the cavity of the corpus uteri and the latter being smaller, previous to conception, than the cervix, the pregnant uterus assumes the shape described by the reader. Another reason for this shape is that owing to the arrest of development and consequent thinning of the walls of the uterus, there is less resistance to the liquor amnii and consequently greater distention.

Dr. H. N. VINEBERG said that some years ago he saw a woman in the Out-Patient Department of the New York Hospital, who had a tumor in Douglas' cul-de-sac. The uterus was thought to be in front of the tumor, and apparently a sound passed to the depth of two or three inches in this situation. She was seen by a number of skilled diagnosticians who agreed as to the existence of such a condition. She was not seen for some months, when one night the speaker was summoned to her house and found her with distinct labor pains. There was still a small body in front of the mass, and no dilatation of the os. The late Dr. J. B. Hunter saw the case with him, and both agreed in the diagnosis of extra-uterine pregnancy, and an operation was advised. She was given a hypodermic injection of morphia to keep her quiet during the night. In the morning, however, she was delivered of a full-

term child. The case proved to be one in which there was an elongation of the cervix and retroflexion of the body of the uterus. During the past summer he had met with three cases of thinning of the uterine body due to atrophy of the tissues around the internal os. The cervical portion could be distinctly separated from the fundus.

Dr. H. L. COLLYER said that in a certain number of cases in which there is elongation, he agreed with Dr. Edebohls that there were diseased tissues around the os, dependent upon cervical endometritis or flexion, etc. This condition might be confounded with Hegar's sign. He had given considerable attention to the early signs of pregnancy, and although Hegar claims that this sign is always present, he had found it absent in about six per cent. of the cases. The softening found is discoverable usually between the seventh and eighth weeks of uterine gestation. An enlargement of the fundus uteri feeling like a rubber ball he had found the most reliable of the early signs.

Dr. CURRIER said that the occurrence of this condition in connection with congenital ante flexion had been noticed by many. Where there is marked ante flexion, it will be observed that the posterior wall is much longer than the anterior wall, and there is often a condition of atrophy at the flexure on the anterior wall. In these cases there is also almost always some dysmenorrhœa with retention of menstrual secretion, and this not only causes pain, but in his opinion leads in the course of time to the condition described in the paper. •

Dr. ADAMS, in closing the discussion, said he agreed with Dr. Edebohls as to the condition being most frequent in primiparæ, and to its being chiefly congenital. Although his own cases occurred in primiparæ, all of those reported by Jones and Martin—eleven in all—occurred in multiparæ.

"An Operation for Acquired Retroversion and Retroflexion."

Dr. W. R. PRYOR presented a paper on this subject, which in his absence was read by the secretary. Dr. Pryor being sick and unable to be present had requested that the paper be fully discussed. (See page 577.)

DISCUSSION.

Dr. POLK said that in the absence of any report as to the precise effect of this new operation, it is difficult to properly criticise the paper. From a theoretical standpoint, however, and arguing from analogy, we have a right to infer that with the uterus placed in this position it would produce those vesical symptoms which we are accustomed to

attribute to an increased weight of the uterus. It is true that the author does not expect an increase in the weight of the uterus, but the speaker thought the directness of the pressure would fully equal that found during pregnancy where we know there is undoubtedly much vesical irritation. As regards the author's criticisms of other procedures, he would say that the one which he (Dr. Polk) had devised he had soon abandoned, because it resulted in a bending of the tubes; this objection did not apply to Dr. Wylie's modification of the operation. He thought the writer was in error with regard to Alexander's operation; for uncomplicated cases of retroversion there is no other operation in his opinion equal to Alexander's operation for the permanency of its results and the ease with which they are obtained.

Dr. H. C. COE said that he thought the theory that vesical irritation was due to pressure on the fundus had been pretty well abandoned. This irritation is really due to traction on the neck of the bladder. He thought however that very marked vesical irritation would follow the procedure advocated in the paper, for there is an adhesion produced between the fundus of the bladder and the uterus which is a very different condition from that of simple pressure. Judging from many cases in which the uterus had become adherent to the bladder, he could not but think that this new operation would prove a failure.

Dr. PAUL F. MUNDÉ said he did not think the operation would stand the test of experience, for he could not see how taking the pressure off the rectum and applying it to the bladder would greatly benefit the patient. Nor did he think the attachment by sutures even if practicable would help the patient. The author was going considerably out of his way to find something better than the methods of operation now in existence. He did not like ventral fixation and would not use it except incidentally when removing adherent ovaries and tubes. He would not open the abdomen solely to perform ventral fixation, particularly for the relief of prolapsus, for the abdominal wall is usually much relaxed, in these cases, and the fundus sinks down and the condition soon becomes as bad as ever. Nor would he resort to ventral fixation for retroversion or retroflexion because he could attain the same result by Alexander's operation. He had done the latter operation over forty times and had yet to regret having performed it.

Dr. BUCKMASTER said that the proposed operation substitutes one position sometimes spoken of as pathological for another which undoubtedly gives rise to unpleasant symptoms—in other words, ante-

flexion for a backward displacement. He thought it much better to have the uterus in the position in which this operation would theoretically place it than to have it in a backward position. Although he had had very little experience in performing Alexander's operation, he had seen the results of many such operations, and they had been generally unfavorable. Similarly, he had seen very distressing symptoms follow many operations for ventral fixation. From this negative experience he would rather try the procedure suggested by the writer of the paper than either of these operations. Where the posterior displacement can only be relieved by severing adhesions, an alternative operation like the one proposed ought to be of value, for we must keep the uterus forward by some means or the adhesions will quickly reunite. He had seen marked anteflexion where the fundus even touched the cervix, yet no symptoms referable to this condition were present. The reasoning of Dr. Coe he thought hardly fair, for the position of the uterus after an operation cannot be properly compared to that following inflammation—it is a different case altogether.

Dr. A. M. JACOBUS said he believed there was less likelihood of vesical irritation following this operation than after either Alexander's operation or ventral fixation, because the uterus can move with the full or empty bladder and would not (as in the former operations) hold it up in a fixed and contracted position. He would like to ask, by way of argument, if large fibroids had not been seen filling up the pelvis and pressing on the bladder without the presence of any bladder symptoms; also if many cases of adhesions between the uterus, intestines and bladder had not been found without any vesical irritation whatever. This had been his experience. The object of the operation is simply to make a slight point of contact between the uterus and bladder sufficient to hold the former forward in cases where abdominal section is indicated for adhesions and diseased tubes and ovaries.

Dr. J. DUNCAN EMMET said there was rarely any necessity in his opinion for the operation of fixing the uterus in a forward position, but he thought the proposed operation less disadvantageous than the others which had been adopted. He did not think it would give rise to the bladder symptoms which would be excited by Alexander's operation, and it was certainly free from the objection of ventral fixation—viz: drawing the uterus far out of its natural position in the pelvis. In the new operation, the uterus is kept nearly at its proper level where the blood can freely pass in and out of the uterus.

Dr. C. C. BARROWS said that if this operation would maintain the uterus in the position in which it is placed, he felt certain it would lack one of the commonest causes of vesical irritation after ventral fixation. After the latter operation the patients have complained of vesical irritation, and this is largely due to the fact that they are unable to completely empty the bladder, probably because the uterus forms a roof over the bladder and the voluntary act made by the patient at the termination of urination by which the pelvic organs are driven down, thus assisting the expulsion of the last portions of urine, is prevented by this roofing over of the bladder by the uterus. It would seem probable therefore that this, the chief objection urged against the operation, might be overcome.

Dr. CLEMENT CLEVELAND said he admired the ingenuity of the operation but was in sympathy with those who had spoken against it. He had abandoned hysterorrhaphy because he had found in Alexander's operation one that filled every indication; he thought it one of the most scientific operations ever devised. The bad results of Alexander's operation alluded to by Dr. Buckmaster were probably due to the fact that the operation had been imperfectly done. He thought any one who had learned how far to draw out the ligaments and how to properly perform the operation, would hardly desire to try any other.

Dr. MUNDÉ said he had been rather startled by Dr. Buckmaster's statements. He had been able to follow at least half of his cases of Alexander's operation and he had only seen one solitary case where the patient complained of pressure on the bladder, and where he thought the ligaments had been shortened too much. One of his cases had had three children; he had seen her recently, and the uterus was still in the position in which he had placed it.

Dr. BUCKMASTER said in reply to Dr. Mundé's expression of surprise at his having seen so many unfavorable results from Alexander's operation, he would try to prepare in the near future a table of the cases to which he had referred. He had found the uterus as far back as before the operation, and in some cases the symptoms were unrelieved; he had found the uterus drawn to one side in some cases, and in others drawn forward. After watching such cases for a number of years he had not been impressed favorably with the operation.

Dr. COLLYER was in doubt as to whether the uterus could be held in the proper position by this new operation. He had seen some cases (where Alexander's operation had been performed) in which the round

ligaments had been drawn up too far, but even in these the symptoms were not nearly so severe as before the operation.

Dr. T. W. CLEVELAND said he had seen a number of cases of Alexander's operation and had followed them very carefully. He had found that they complained of less irritation than those in whom anterior fixation had been performed. In the latter there was great irritability of the bladder, and still more irritation at the seat of adhesion. The Alexander operation cases which complained were those where the ligaments had been drawn too tightly. Out of one hundred such cases seen, he had found one where the ligaments had ruptured after a difficult labor and instrumental delivery. He had followed many of Dr. Polk's Alexander operations, and they had given much less trouble than the cases of hysterorrhaphy.

Dr. DUDLEY said he did not wish to compare this new operation with Alexander's operation, for he felt sure the writer would only do this new operation in cases where he would also have to do abdominal section. This should be carefully born in mind. Four or five years ago the speaker said he read a paper and reported a number of cases in which he had devised and performed a very similar operation for the purpose of relieving displacements accompanied by adhesions. In this paper he only referred to those cases where, except for the new operation, abdominal section would have been necessary. Three of these cases out of five had become pregnant, hence it was evident that this method of operating did not interfere with the integrity of the tube.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL SOCIETY.

Stated Meeting, May 2nd, 1893.

W. GILL WYLIE, M. D., Vice-President, in the Chair.

A New Suspensory Crutch.

Dr. JOHN ASPELL presented a new suspensory crutch for the lithotomy position. It consists of a band of webbing about seventy-five inches long, with a sliding buckle which admits of making the webbing into a loop of varying size. It takes its bearing on one shoulder and on the neck, as in other similar devices. It is simple, portable, and inexpensive.

Dr. G. M. EDEBOHLS presented three fibromatous uteri recently removed by coelio-panhysterectomy.

The first was a specimen of

Fibromatous Uterus Resembling a Double Uterus

and was interesting mainly from a diagnostic point of view. The fibroma, as will be seen from the specimen, was almost the exact size of the corpus uteri itself and was attached to the uterus by a short, thick pedicle arising from the junction of the corpus and cervix on the right side, so that, to the bimanual touch, a double uterus with a single cervix was exactly simulated. The differential diagnosis, however, was made before operation, without the use of the sound, by tracing both tubes to the left half of the pelvic mass, which was thus proven to be the corpus uteri. The entire uterus with the tumor and both tubes and ovaries were removed in one piece on March 2nd, 1893. The patient made an uneventful recovery.

The second specimens were a fibroma and a fatty heart from a case of

Fibromatous Uterus Removed by Total Extirpation. Recovery, with Subsequent Sudden Death Due to Fatty Degeneration of the Heart.

The patient was a single woman of thirty-seven, who had known of the existence of her tumor for about three years. The tumor, a soft myoma weighing five pounds, was removed by total extirpation on February 17th, 1893, the tumor, entire uterus, tubes and ovaries being taken away in one piece.

After a perfectly smooth convalescence, and while sitting up in bed enjoying her dinner on the thirteenth day after operation, the patient suddenly turned blue, fell back in bed, gasped a few times and died.

The autopsy revealed nothing pathological except in the heart. Both auricles and the right ventricle were greatly distended and their walls attenuated in the extreme. The right ventricle had stopped in diastole, being hyper-distended with black, partly-clotted blood. The fatty degeneration of the right ventricle was extreme, the walls at many places, throughout their entire thickness, being converted into fat. Whatever remained of the heart musculature had undergone granular degeneration.

The case illustrated the well-known association of degenerative changes in the heart muscle with fibrous disease of the uterus, and

emphasized the advisability of early removal of the fibromatous uterus, with the view of forestalling the fatal degenerative changes of the muscles of the heart.

The third specimen was from a case of

*Cælio-Panhysterectomy for Fibroma. Acute Intestinal Obstruction
Relieved by Lavage of Stomach. Recovery.*

The specimen, a fibroma weighing four pounds, was presented mainly for the purpose of directing renewed attention to the fact that the gravest cases of intestinal obstruction following cœliotomy may be relieved, after the failure of all other measures, by washing out the stomach.

The patient was a single woman of thirty and had suffered for about three years with pelvic pressure symptoms, chiefly affecting the bladder, due to the presence of a fibroma snugly fitting into and filling the pelvic inlet.

The tumor, uterus, tubes and ovaries were removed in one piece viâ the abdomen, on February 23, 1893. The peritoneal wound at the bottom of the pelvis was closed by a running Lembert suture of catgut; in doing so, the sigmoid flexure was engaged somewhat in the left end of the seam. The abdominal wound was firmly closed without irrigation and without drainage.

Incessant vomiting began immediately after recovery from the ether and continued without intermission until the fourth day, the vomited matter being of a dark-green, bilious color, and towards the end having a decidedly feculent odor. No flatus was passed and no movement of the bowels was obtainable by any of the means usually employed in these desperate cases. Prostration was extreme, the patient appeared moribund, and preparations were being made for a cœliotomy, when Dr. Edebohls, recalling the favorable results obtained by Klotz, in similar cases, from lavage of the stomach, resolved to give the method a trial.

The stomach was accordingly washed out with a weak solution of bicarbonate of soda, four to five litres of the fluid being used. The effect was magical. The vomiting ceased at once and did not again recur; complete and permanent euphoria was established, and the case from that moment on ran a perfectly uneventful course. The bowels moved spontaneously two days later.

Klotz, of Dresden, to whom Dr. Edebohls would here express his profound obligations, in a modest article, less than a page in length,

(*Centralblatt für Gynäkologie*, 1892, No 50, Page 977.) outlines his exceptionally large and favorable experience in the treatment of intestinal obstruction following operation. Of five hundred and sixty-nine cases of cœliotomy and vaginal hysterectomy performed during a period of ten years, thirty-one had ileus, or intestinal obstruction, following operation. Six of the thirty-one were treated by cœliotomy with two deaths. The remaining twenty-five were treated by lavage of the stomach, with three deaths.

Klotz treated all of his cases on the fourth or fifth day, washing out the stomach with four to six litres of a lukewarm salt solution. If the first lavage failed to control the symptoms, a second was given soon after, followed by the introduction, through the tube, of fifty grammes of castor oil into the stomach. In all the twenty-five successful cases thus treated vomiting ceased immediately, flatus was passed after two or three hours, and a stool was obtained after ten hours at the latest. He holds slight, and in the beginning easily separable, adhesions responsible for the ileus in the vast majority of cases, and ascribed the relief afforded to the increased intestinal peristalsis induced by lavage of the stomach.

With these latter views Dr. Edebohls was inclined to coincide. He considered it highly probable that in his case the upper end of the sigmoid flexure contracted slight adhesions which yielded to the peristalsis excited by washing out the stomach.

Dr. EDEBOHLS presented as a fourth specimen,

A Gangrenous Omental Cyst Removed by Cœliotomy. Recovery.

The specimen was removed from a married nullipara, aged thirty-seven, who had noticed the existence of abdominal enlargement for eight months preceding operation. Her physician, Dr. G. J. Moser, discovered the existence of a tumor and kindly referred her for operation.

On examination a smooth, rounded, distinctly fluctuating tumor, estimated at some eighteen to twenty centimeters in diameter, and freely movable, was found occupying the umbilical and lower abdominal regions and resting upon the pelvic brim. The tumor was not connected with the uterus, and the right tube and ovary could be made out as normal. The left tube and ovary, however, could not be distinctly palpated, the patient being very stout, and the tumor was taken for a cystoma of the left ovary.

Cœliotomy, April 21, 1893. A cyst presenting the ordinary char-

acteristics of an ovarian cystoma presented. On further examination the uterus, both tubes and both ovaries, were all found perfectly normal and not connected with the cyst in any way. The tumor had no attachments or connections of any sort except to the omentum, to the lower border of which it was joined by a short, though substantial, pedicle, ten centimeters wide by about two centimeters in average thickness. The monocyst, for such it proved, measured twenty centimeters in diameter and was filled with a chocolate-colored, turbid fluid. The cyst wall was gangrenous over a circular area, some twelve to thirteen centimeters in diameter, that section of the cyst wall most distant from the pedicle being involved in the process of mortification. The dead sac wall ruptured during removal of the cyst and a very small portion of the contents of the cyst escaped into the peritoneal cavity. The patient, notwithstanding, made a typically smooth recovery. He would ask that the specimen be referred to the pathologist of the Society for further investigation.

There was no twisting of the pedicle and no history of trauma. The gangrene was probably due simply to insufficient nutritive supply from the poorly vascularized edge of the omentum.

DISCUSSION.

Dr. PRYOR said that in view of the great importance attaching to such microscopical changes in the heart and other organs, he would move that the specimen of fatty degeneration of the heart be referred to the pathologist of the Society for examination. Carried.

Vaginal Aspiration of Pelvic Abscess and Drainage After Cœliotomy.

Dr. W. R. PRYOR presented a number of specimens as follows:

I present to-night a dozen or so specimens, some old, some recent, and will save you the detailed accounts of them and the cases. Suffice it to say that they illustrate about every variety of tubal inflammation as we meet with it, from the most acute infection with tubes almost necrotic, to the older lesions of chronic pyosalpinx and ovarian abscess. Even by ocular examination of these specimens can be appreciated the multitudes of adhesions which exist with the majority of them. In some of the larger abscesses, pus escaped in their removal, and in all of the most acute such escape took place. Some of the operations were done in Trendelenburg's posture. In no case was the abdomen flushed or irrigated and in no case was drainage employed. No case had a degree of temperature, save one due to imperfect preparation of partially strangulated bowels. No two specimens are from

the same case, and the specimens have not been shown before. All recovered. They have been selected merely to form a series and furnish a text. Preliminary curettage was done whenever there was a suspicion of septic endometritis.

I exhibit these specimens for the purpose of adding to the steadily accumulating evidence showing the utter uselessness of drainage in these cases. Did I stand alone in this matter, I would not dare come before you with such a statement. But, backed as I am by such men as Howard Kelly and Baer in this country, Leopold and Winckel with nearly all prominent operators in Europe, I feel that my statements have some weight. Let us consider the methods of the men who drain. They still cling to washing out the abdomen, to chemical antiseptics, and the drainage-tube. If you irrigate, you must use the tube to remove the fluid you thus introduce. Now certain careful investigations have been made as to each step of their method, and certain conclusions reached.

1. *Antiseptics.* These may not be introduced even much weakened, into the peritoneal cavity, without injuring the endothelium. Even plain water causes it to exfoliate, and destroys the serum's antiseptic properties.

2. *Irrigation.* If warm sterile water be introduced and followed by the injection of pathogenic germs, infection takes place; whereas if the latter are not preceded by the use of water, such infection does not ensue. Those experiments on the healthy peritoneum. How much more injurious must flushing be when the peritoneum has been wounded by operative procedure! Besides flushing disseminates any possible germs in the pelvis to the general cavity among the intestines.

3. If the drainage tubes are introduced, it has been proved impossible to avoid post-operationem infection without the use of antiseptics. So a clean operation is rendered foul by them.

4. The advocates of the drainage-tube are opposed to preliminary cleansing of the septic uterus; but prefer to operate without the benefits to be derived from that procedure. They advise the use of the drainage-tube to remove blood and serum which may give rise to sepsis. Let us consider that.

1. Large quantities of blood may be injected into the peritoneal cavity without injury, and is rapidly disseminated throughout the cavity not remaining in one locality. So much for experiment. Clinically we know that severe hemorrhage may occur into the peritoneal cavity from ruptured spleen, mesenteric vessel, or extra-uterine pregnancy,

without septic manifestations, provided the ratio of escaped blood to body weight be not too high.

2. Fresh blood serum such as escapes from raw surfaces is not only innocuous but it is positively antiseptic, thousands of typhoid bacilli introduced into such being dead in twenty-four hours. But when the serum is diluted by water its germicidal property is destroyed. Clinically we know that cases producing the most serum are least liable to infection, and broad ligament cysts rupture without symptoms.

3. So much for the tolerance of the peritoneum. The only sepsis the drainage-tube removes is that which is introduced by the operator, and the only irritating fluid drained away by it is what he has put in.

The results of the use of the drainage-tube are :

1. Possible infection of the wound.
2. Probable ventral hernia.
3. Inevitable binding together of the intestines by adhesions.

It is utterly impossible to remove these growths and close the belly without drainage unless we *see* what we are doing, do a perfectly aseptic operation without the use of strong chemicals, and catch by means of gauze any septic contents of sacs evacuated. Presumably the advocates of drainage have been forced by experience to give vent to sepsis left remaining after or introduced at the time of operation. And yet that may scarcely be, for they depict their results as almost perfect. Yet we are led to wonder why it is that they not only drain the easy cases, but also aspirate the difficult ones per vaginam. For it is not believed that they aspirate the simple cases and remove larger and more adherent pus tubes. I presume no one will claim that broad ligament abscess is common; in fact, most of us believe it very rare. The vast majority of cases tapped per vaginam are cases of pyosalpinx not broad ligament abscess. Then if the method of the men who use drainage tubes is so perfect, why do they aspirate so large a percentage of their cases per vaginam? The palliative treatment is applied to the difficult cases and the perfectly simple ones are given irrigation drainage and disagreeable sequelæ. The truth is: no longer may the rules be laid down that the raw surfaces left from removal of those growths must be drained by tubing, and no longer can we adhere to the method of washing out the abdominal cavity when pus escapes during the operation. The method used should be so perfect that both are rendered unnecessary.

As for evacuating the pus from below, were that advocated as a means merely to gain time and allow the woman to build up for a

radical procedure, we might believe it rational. But inasmuch as in the last report of forty cases by the Drs. Wylie advocating this procedure only about 17.5 per cent. of cases so tapped were subjected to the radical operation, we may infer that the treatment is merely palliative. The remaining 82.5 per cent. of cases are not well, but the women still have their pus sacs within them. For it is admitted among surgeons that where suppuration takes place in a preformed sac lined by epithelium, not only may the pus be evacuated, but the sac must be extirpated. That is one of the established rules in surgery. Somebody will have to remove those pus sacs and in a much worse condition than before they were tapped. Of course if these gentlemen who stick trocars into women's vaginæ claim that the abscesses *they* find are in the broad ligament, we can only say that they are reverting back to the old cellulitis theory of the origin of pelvic pus, or else nine hundred and ninety-nine pathologists and gynæcic surgeons out of a thousand are wrong in stating that broad ligament lymphangitis is rarely the cause of pelvic abscesses, except after labor, and under all circumstances they are infrequent.

We are, then, forced to the conclusion that these inflammatory pus-producing growths should be removed by a method which does not necessitate drainage; and that to aspirate them from the vagina is merely a makeshift; is not radical; leaves behind the pus sac to refill again in a worse condition than before, for now it is firmly adherent to the vagina by a mass of scar tissue due to the closure of the track of the drainage-tube. My experience is limited, sir; so is Kelly's, so is Baer's, so is Leopold's, so is Winckel's—all experience is limited. Though the combined experiences of men who get from completed, non-drained operations without sequelæ a mortality of about three per cent. may be called limited to be sure, yet they certainly demand respectful recognition. Suspicion rests not upon such limited experiences, but upon that technique which embraces drainage and vaginal tapping. Drainage is not only useless, but it also conduces to ventral hernia and invariably leads to the formation of a multitude of adhesions. We must consider any case drained as an incomplete operation.

Some cases must be drained, but not by a small glass tube. Such are cases where breaches are made into sound tissue, where the unclean vagina or bowel is opened and cases which have been previously tapped. With the possibility, now, thanks to Krug's vigorous presentation of the advantages of Trendelenburg's posture, of seeing what we are doing such accidents are rare.

Altogether I can not refrain from stating my belief that the advocacy of vaginal tapping is a step backwards, and the method which requires drainage is faulty and not to be adopted. Understand me, all I have said is limited to pus tubes or ovarian abscess, generally classed as pelvic abscess. The report of even innumerable operations with a low rate of mortality, if irrigation and drainage have been employed in the simple cases and vaginal tapping in the more acute and difficult, is the report of poor work, incomplete work, work with a great deal left behind in the way of possible hernia and inevitable false bands. The larger the number of such operations reported, the more damning is the argument against the method under which these women have suffered. For the convalescence of drainage-tube cases is usually febrile, showing that infection has occurred; the adhesions are a constant cause of irregular intestinal action and render the patient liable to intestinal obstruction; while the ventral hernia must be cured by a second cœliotomy.

The specimens of pyosalpinx and ovarian abscess presented to-night together with what I have previously shown or done, constitute a series of thirty-two operations. None were drained though all were adherent. None had been tapped per vaginam; all recovered.

DISCUSSION.

Dr. A. F. CURRIER thought the subject too important a one to pass without comment. In his opinion, the speaker had laid down altogether too broadly the rule about drainage. He agreed entirely with him that in a case of pyo-salpinx or ovarian abscess which is isolated, and can be removed entire, there is no occasion for drainage; but where, as in many cases of pyosalpinx, there is an abscess surrounding the tube, there is liability of the tissues being infected during the removal of the abscess, it would seem to be a safer practice to adopt drainage in some form. By this, he did not mean that the drainage-tube ordinarily employed is necessary, but that some form of drainage, as for instance gauze-packing, is desirable. The use of the drainage-tube enclosed in gauze-packing is in some cases useful for a very limited time.

Dr. R. H. WYLIE said that he thought the tendency was more and more towards the abandonment of abdominal drainage, and that very soon drainage would be confined to a very few cases. The Trendelenburg position had done much toward bringing about this change. In cases requiring abdominal drainage the after-treatment requires more

skill and labor. In his recent paper he did not mean to say that the patients entirely recovered after drainage by vagina, but that many of them got so much better that they refused to submit to more radical measures. Still there were quite a number of cases in which the sepsis was so great that drainage through the vagina in his opinion was a necessity. He endeavored to state the indications in his paper for drainage through the vagina. He had also distinctly stated that it was very rare to find a cellulitis in the broad ligament around the uterus not associated with the tubes and ovaries, as the latter were usually the focus of the suppurative process. In this age of coeliotomies many of us have overlooked the possibility of a patient having a true cellulitis; such a condition is often associated with a laceration of the cervix. Nature cures a great many of these by spontaneous rupture into the vagina, or they are cured by puncture through the vagina without resort to coeliotomy. The acute cases of cellulitis more often come under the care of the physician and hence the operative surgeon of the present time does not often see them.

He had seen a recent illustrative case in Bellevue Hospital—a patient who had been a short time before confined. Both the anterior and posterior vaginal fornices bulged downward as a result of the exudation. He watched the case carefully, believing he had both a cellulitis and a salpingitis, but as no point of fluctuation could be obtained through the vagina tapping was not done. Subsequently he did an exploratory coeliotomy and was able to demonstrate perfectly and absolutely that the trouble originated in the cellular tissue around the cervix and had involved only secondarily the tubes and ovaries. The tubes and ovaries were not removed because they were simply embedded in adhesions. Finally, a collection of pus was detected by vagina, but before it could be opened it had ruptured by vagina. He thought if Dr. Pryor would read his paper more carefully, he would find that they did not differ so greatly in their views as it might seem from his remarks to-night.

Dr. G. M. EDEBOHLS said he would indorse Dr. Pryor's position about drainage in abdominal surgery. He had himself discarded the use of drainage-tubes for several years past. Dr. Wylie referred to the performance of coeliotomy in a case of abscess of the parametrium and immediately afterward said it was wrong to do coeliotomy in these cases. He could see very little difference between doing an exploratory coeliotomy and doing something else after opening and again closing the abdomen. He would still call such a coeliotomy exploratory.

Recently he found on making an abdominal section a catarrhal salpingitis on both sides, due to sepsis after labor, and an abscess in the right parametrium. The tube and ovary were removed clear above the parametric abscess and without establishing a communication between abscess and peritoneum. The abscess was undoubtedly due to puerperal parametritis going on to suppuration, and had its origin in a deep tear of cervix and vagina.

Dr. J. RIDDLE GOFFE was glad to hear of Dr. Pryor's abandonment of the drainage-tube. He had not himself employed a drainage-tube in the abdominal cavity for six years past, for it furnished an entrance as well as an exit for bacteria, and in this way was often productive of a fatal result. He would not, however, go so far as to totally abolish drainage. It is not well to apply one idea to all conditions and totally disregard the peculiar circumstances in individual cases. Dr. Pryor had been peculiarly fortunate in having all his cases recover. In many instances if the pelvic cavity be well flushed out, even after free pus appears in the pelvis, recovery ensues, but he felt much surer if he secured drainage in such bad cases by the use of iodoform-gauze packing.

Dr. PRYOR, in closing the discussion, said that of course broad ligament abscesses do occur and must be drained *per vaginam*, but they were exceedingly rare. But Dr. Wylie's cases could not be of broad ligament origin; for the doctor had exhibited an ingenious canula and trocar so arranged that the change of posture of the patient would not cause the opening in the abscess to slide past the opening in the vagina. This accident, from the great mobility of the abscess, Dr. Wylie had noticed and to overcome it he had inserted a self-retaining canula. His cases were most of them of tubal origin, undoubtedly. In answer to a question from Dr. Goffe, he said that his cases were selected ones, and that they had been chosen simply to show the more acute forms of inflammation.

A Case of Supra-Pubic Hysterectomy.

Dr. J. E. JANVRIN exhibited the specimen.

Mrs. T., widow, age forty-four years. Some eleven years ago had severe typhoid fever and since that date has suffered a great deal from acid indigestion and flatulency, at times for days being unable to take any nourishment. As a consequence is very anæmic and considerably below par.

On March 31st (this year) patient was brought to my office by her

physician for examination. Her history presented nothing whatever (excepting as before mentioned) of a pathological character. All her functions, excepting digestion and assimilation, had been perfectly normal.

A few days prior to coming to me, her physician, in examining over the region of the stomach had discovered quite a large abdominal tumor and for this reason had brought her to me for diagnosis. Examination showed two large sub-peritoneal fibromata of the uterus, the largest occupying the right upper segment of the uterus and extending to the right of median line three inches above the umbilicus, the other occupying the left horn and extending upward and to the left to a point about two inches below the umbilicus. The uterus itself occupied a median position, its cavity being four and a half inches in depth. The growth on the right side crowded upon the liver and stomach and undoubtedly aggravated the dyspeptic symptoms. I advised supra-pubic hysterectomy and the patient entered my sanitarium on April 15th. The operation was performed on the 17th, (two weeks ago yesterday), and she has made a perfectly satisfactory recovery. The operation was that of ligating the ovarian arteries first between the tumor and ovaries, by two ligatures, and then cutting the broad ligament downward between the ligatures about one third of its breadth, until it became necessary to apply the second ligatures in the same way, (which ligatures included the balance of the broad ligament down to the uterine arteries). Having cut between these ligatures nearly down to the uterine arteries, the third ligature was applied around the uterine artery. This being accomplished on both sides the peritoneum was dissected down from the lower portion of the mass, both anteriorly and posteriorly, the uterus and tumors cut away, leaving the entire cervix. The latter was covered over by the peritoneal flaps, sewed together by simple continuous catgut suture. The tumors were very vascular and at several points during the operation it became necessary to use strong clamp-forceps temporarily to control hemorrhage. There were moderately strong adhesions of the sigmoid flexure to the left mass. They were separated without damage to the intestine and but one bleeding point required ligating. The abdominal cavity was washed out by sterilized hot water prior to bringing the peritoneal flaps over the cervix. There was no oozing from the cervix, every vessel being controlled by the three ligatures upon either broad ligament. The tumors being entirely in the uterine body, the cervix being perfectly normal in shape, and the adhesions to the intestine and

omentum being easily taken care of, the case was an excellent one for the *ideal* operation of coelio-hysterectomy; for it seems to me that this method of operating (which is the outcome of the labor and observation of many gynæcologists abroad and in this country during the past fifteen years or more) is really the ideal method. The stump (cervix) being thoroughly covered by the peritoneal flaps, of course the peritoneal cavity cannot be in any way affected by it. There is no demand for drainage from the peritoneal cavity, as a rule, immediately following the operation; neither is there a demand for subsequent drainage of the pelvic cavity down through the os as is the case in the method devised by Drs. Goffe and Dudley in which the cervix is included in the ligatures, and in which the subsequent death of the constricted portion of the cervix in the pelvic cavity necessitates its removal together with the constricting ligature. This operation of Drs. Goffe and Dudley has undoubtedly had a marked influence in perfecting the present operation.

DISCUSSION.

Dr. A. B. TUCKER said that he presented a somewhat similar case at the last meeting. Ten days later he found it necessary to drain and obtained about a pint of pus under the flap.

Dr. PRYOR asked: Why not go further and take out the rest of the cervix? There is a certain percentage of these cases where there is malignant disease associated with the fibroid, and hence he could not see any good reason for leaving the cervix in. Ablation is almost as easy and rapid as any other operative procedure and in his opinion was the preferable operation.

Dr. P. F. CHAMBERS said he very much preferred the operation of total extirpation, whether there was any danger of malignancy or not. It is very little more difficult than the flap-operation, much better drainage can be secured, and he could see no advantage whatever in leaving the cervix.

Dr. GOFFE thought that operators on these cases were pretty well agreed that the intrapelvic treatment of the stump is the ideal method. When he devised this method of covering the cervical stump with peritoneal flaps and published it in 1890, the method then mostly in vogue was to secure the stump in the abdominal wall; the Schroeder method was not popular, and his paper had apparently turned the attention of the profession to the fact that the intrapelvic treatment of the stump

could be safely managed. In devising that method one error had been made—viz: the strangulation of the tissue beyond the ligature, and therefore the occurrence of suppuration. While he was endeavoring to overcome this objection, other operators conceived the idea of ligating the arteries in the broad ligaments and by avoiding the use of the ligature of the stump doing away with the possibility of suppuration. With this modification, he thought his operation was the ideal one. The old Freund method of total extirpation is prominently advocated by many operators, but it did not seem to him as neat and complete an operation in its finish as his. There is a large amount of raw surface which must be disposed of in the operation of total extirpation. With the modification of his operation already described, there is no suppuration and no necessity for drainage either in the pelvic cavity or in the vagina, and convalescence is even and satisfactory. With total extirpation, drainage with iodoform-gauze in the vagina is necessary and requires subsequent attention; hence the after-treatment is more troublesome.

Dr. EDEBOHLS said he was an advocate of total extirpation of the fibromatous uterus when any operative procedure is attempted, first because it is not more difficult or more time-consuming than supra-vaginal amputation; and secondly because convalescence is safer and surer than when a stump is left, no matter how the latter may be treated. He wished to correct a false impression which might have been caused by the last statement of the preceding speaker, to the effect that total extirpation involves drainage into the vagina. Quite the contrary; he practiced total extirpation and then closed the opening in the bottom of the peritoneal cavity by a transverse running Lembert suture of cat-gut extending from one ligated spermatic artery across to the other. There is no more need for drainage after total extirpation than after simple ovariectomy. The mortality after total extirpation for fibromatous uterus he thought should not be greater than after the removal of a simple ovarian cyst without complications, and fibroid tumors complicated with any other intraperitoneal condition should not give a greater mortality than an ovarian cystomata complicated with the same conditions. He did not apply the operation of total extirpation universally, sometimes practicing myomectomy and sometimes salpingo-oöphorectomy; but where he had removed fibroid tumors with the uterus he had employed this method. He had had but six cases of total extirpation of the fibromatous uterus, in each closing the peritoneal cavity as above described, and all had recovered except the one

whose fatty heart he had presented this evening, and here of course the death had nothing whatever to do with the operation.

Dr. PRYOR said that there had been altogether, he believed, forty nine cases of this new operation with four deaths. He thought the statistics of this operation compared favorably with those of the older one.

Dr. GOFFE said he could not state the mortality following the operation as the cases had not all been placed on record. He had himself done six with one death from shock. He knew of about fifteen cases here in the hands of a number of operators with three deaths. In England he knew of thirty operations with three deaths, and Dr. Milton a physician in Cairo, Egypt, had reported three cases, all successful. He thought the percentage of recovery was higher than in any other method which had been suggested.

Dr. JANVRIN, in closing the discussion, said he had had an extensive experience with malignant disease, and he had frequently met with fibroids associated with such disease. The fibroids were however always small, and the operation was required for the malignancy and not for the fibroid. Regarding the comparative facility of the two operations, in cases where there is no malignant disease, he said that he much preferred leaving the cervix in place. Of course, if the fibroids penetrated into the cervical tissue, it would certainly be much better to remove the entire cervix. He thought the partial operation the quickest and easiest, and in his hands it had been followed by the least shock. There is certainly enough blood passing through the cervix from the vagina to keep up the proper vitality of the cervix where there is no constricting ligature around it.

Some Mooted Points in Gynecological Diagnosis.

Dr. JOHN ASPELL read a paper with this title. (See page 585.)

Dr. A. H. GOELET reported a case and showed a specimen of

Hydrosalpinx and Cystic Ovary.

Mrs. S., aged twenty-four years, married six years, sterile, consulted me in August, 1892, for the relief of a constant dragging pain in the back, over the sacrum, and pelvic pain, referred more especially to the left ovarian region, associated with dysmenorrhœa and at times considerable leucorrhœa. These symptoms dated back several years but were more pronounced during the last year or two.

On examination the vaginal vault was found to be very sensitive, particularly to the left of the uterus, and posterior to the uterus there was a round, smooth, elastic tumor which was taken for a cyst. The ovary was tender and appeared to be enlarged.

The patient was told that treatment would afford only temporary relief and that an operation for the removal of the tumor was advisable and would eventually be necessary. She objected to the operation and decided upon a course of treatment which I told her would relieve the symptoms. Bipolar vaginal faradization was commenced and afforded prompt relief of the backache, ovarian pain and other symptoms of pelvic congestion. As soon as it was judicious the negative pole of the galvanic current with a moderate current strength (10 M.) was applied to the uterine canal for a few times with the result of effectually overcoming the dysmenorrhœa, and soon the leucorrhœa ceased. She was so much encouraged after about two months of this treatment that she began to hope an operation would be unnecessary. This idea was, however, discouraged. The tumor did not diminish in size but ceased to give her any further annoyance. Nothing had occurred to change my opinion of the case though I could see no urgent necessity for an immediate operation, but I urged her on discontinuing treatment, not to delay the operation long, as the tumor would certainly increase in size and it could be removed more easily and more safely while small.

I did not see her again after about the first part of November until the middle of March, 1893. She stated that she had no return of the pain, leucorrhœa or dysmenorrhœa, but for two weeks back she had had some of the old backache, though it was not so severe and not constant. She had made up her mind to undergo the operation because she wanted to have it over. She consented to have the tumor and one ovary removed if I would agree not to remove the other, even if I found it diseased. Accordingly she was prepared for the operation which was performed March 26th.

The specimen which I show you is, as you see, a hydosalpinx with a cystic ovary and not a cyst as I supposed. There were no adhesions and it was easily gotten out. The other ovary was not inspected, though to the touch it appeared to be normal. No drainage-tube was employed.

The patient made an uneventful recovery though there was persistent vomiting for forty-eight hours from the effect of the anæsthetic. The sutures were removed at the end of a week, complete union being secured, but an attack of severe vomiting provoked by a cathartic

administered the day the sutures were removed, opened the wound for about three-quarters of an inch at the lower angle. This healed again nicely, and the patient has entirely recovered.

The case is reported to show what can be accomplished in the way of relief of pain and other symptoms in these cases by the use of faradism. It will be observed that there was no return of the symptoms at the time of the operation, four months after treatment was discontinued.

DISCUSSION.

Dr. PRYOR said that in a previous paper Dr. Goelet had reported cases of pyosalpinx which he had cured by electricity; why could not this pyosalpinx have been subjected to the same treatment?

Dr. GOELET replied that he had reported cases cured by drainage through the uterus, secured by electricity, but this case could not be cured in this way because the tube was prolapsed behind the uterus and completely occluded, and therefore it could not be drained into the uterus.

Dr. W. M. POLK made some remarks on

Operation for Enterocoele.

The patient was forty-seven years of age, had been married twenty-five years, and had six children, the last child having been born nine years ago. The labor was very tedious, continuing for forty-eight hours. This was the only severe labor that she had ever had, and with the exception of the prostration incident to the tedium of this delivery she had never suffered from any illness. After the birth of this child she noticed, as she expressed it, that her womb came down, interfering with walking; that when she sat down it would go back to its normal position with a loud noise, greatly to her embarrassment.

The prolapse is sufficient to cause the patient great annoyance, especially at the time of the movement of her bowels. Before the bowels can be evacuated she has to press the prolapsed tissue back into position.

Physical examination shows that there is a projection into the vagina of a mass which springs from the posterior fornix of the vagina. It fills the entire canal, and when the patient strains, descends fully an inch outside of the vulva.

Placing the patient upon the back, the mass is easily reduced, and the uterus and bladder are then found to be in normal position. Introduction of the finger into the rectum shows that the anterior

rectal wall is in normal position. Careful examination of the mass itself showed clearly that it is an enterocele, descending through Douglas' cul-de-sac and pushing the posterior fornix of the vagina before it.

The case was treated in the following manner: Cutting directly through the prolapsed tissue, the peritoneal cavity was entered. A free opening was then made over the whole face of the enterocele, extending from the utero-vaginal junction to the lower vaginal wall. The peritoneum was brought together with catgut sutures along a line from behind forward, that is from the anterior rectal face to the posterior uterine face, all of the *slack* having first been cut away. In this way the contour of the floor of Douglas' cul-de-sac was first restored. Dr. Polk then cut away the superabundant vaginal tissue which had been produced by enterocele, and brought the edges together in such a way as to restore the normal calibre of the upper part of the vagina.

Heretofore these enteroceles have been treated by some plan other than the one here mentioned. Dr. Polk would suggest, as they belong to the class of hernias, that as far as possible they be treated upon the principle that prevails in umbilical and other hernial protuberances. This was the plan which he pursued in this case, and the result warrants him in believing that it is the proper course to adopt.

He has not seen the patient within the last six months, but up to that time her condition was quite as good as at the time of her discharge from the hospital. At that time the contour of the vagina was the same as had been obtained for it at the time of operation. There was no sagging of the upper posterior wall and the result justified his expectations. He would suggest, in all of these operations about the upper part of the vagina, where the peritoneal cavity has to be entered, and where the coils of small intestines are apt to prove embarrassing by coming down into the field, that the posture of the patient materially assists in the ease with which the operation can be done. In this case, he simply put the patient upon a slightly inclined plane, head downwards, and gravity easily kept the intestines away.

DISCUSSION.

Dr. CHAMBERS remarked that Dr. Thomas' patient referred to by the speaker was a single woman.

Dr. EDEBOHLS said that as in the case reported there was a bulging at the upper end of the posterior vaginal wall with the contents of Douglas' cul-de-sac behind it, it was properly termed a vaginal

enterocele. He had had one such case; it occurred in a nulliparous woman, twenty-eight years of age. The peritoneum was not relaxed materially, the lower half of the posterior wall of the vagina was in place, but the upper half bulged far down into the vagina. In that case he succeeded in effecting a cure by doing a high posterior colporrhaphy, i. e., by cutting out a sufficiently large elliptical segment of the posterior vaginal wall high up without opening the peritoneum. When the edges were brought together from side to side, the vaginal enterocele was obliterated. This was about four years ago, and there had been no return of the enterocele. In Dr. Polk's case the resistance to the recurrence of the enterocele must come chiefly from the vaginal walls, for he thought not much dependence could be placed on the resistance offered by the peritoneal line of union. Hence, he did not think it necessary to open the peritoneum; it was safer to approximate the vaginal wall simply as in colporrhaphy.

Dr. PRYOR said he had seen three frozen sections in which Douglas' cul-de-sac was down on the perineum. They were apparently of congenital origin.

Dr. POLK said he thought Dr. Edebohls was wrong in his estimate of the value of the operation done in his case, and he was not yet prepared to deny that there was a certain amount of resistance from the peritoneum. He thought a more permanent result would follow the coaptation of both the peritoneum and the vaginal tissues. Another advantage from opening the peritoneum is that in these cases the utero-sacral ligaments are nearly always relaxed, and hence, if enough resistance cannot be obtained from repair of the bottom of Douglas cul-de-sac, one can approximate to a certain extent the uterine end of the utero-sacral ligaments. It was not necessary however to do this in his case.

Dr. W. G. WYLIE said that he had seen such cases associated with injury, as for instance to the floor of the pelvis. He was inclined to think they are chiefly of congenital origin. He would attribute considerable resistance to the peritoneum, yet he did not think much was necessary to hold up the hernia.

Accouchement Forcé.

Dr. E. H. GRANDIN said that at the last meeting of the American Gynecological Society, held in Brooklyn, he had advocated in certain cases recourse to accouchement forcé, a method which had been abandoned and condemned by almost all obstetricians from the dark

ages to the present time. In the paper referred to he cited a number of instances of placenta prævia, one or two instances of impending uræmia, and one case where the emergency led him to adopt accouchement forcé to induce labor four weeks before term. In every case he saved both the mother and child. The paper was pretty severely criticised at the time, because it was radical, and was a revival of an old method which had fallen into disuse. Since then he had resorted to the method as a life-saving measure, in three more cases, and with the same result. The cases were all seen in consultation; two were instances of placenta prævia and one of impending uræmia.

The first case was that of a multipara, thirty-two years of age, in whom the membranes had been ruptured four hours before, and the attending physician, having detected a marginal attachment of the placenta, had thoroughly tamponed the vagina. There was a transverse presentation, the foetal heart was active and strong, and the patient was moderately exsanguinated. At the time of introducing the tampon, the physician said the cervix admitted only one finger. Accouchement forcé seemed to offer the best chances for both mother and child. Under chloroform anæsthesia, the tampon was removed, and an examination showed that the cervix would admit two fingers. The elbow presented and the placenta was attached to the left lower uterine segment. In thirty minutes the cervix had been dilated, podalic version had been performed, and the uterus tamponed with gauze. Both mother and child survived.

The second case was that of a primipara. The family physician had recognized the condition and had tamponed. Under chloroform anæsthesia the cervix only admitted one finger. The cervix was dilated manually, and podalic version performed with immediate extraction of the child and placenta, and the uterus was tamponed—all within forty minutes from the beginning of these operative procedures. The result was the saving of both mother and child. Thus, he had had five cases of placenta prævia, in all of which both mother and child were saved. In the cases of impending uræmia, he emptied the uterus, and deliberately allowed the mother to bleed from the uterus in order to reduce the arterial tension. When the third case was first seen by the speaker, no foetal heart could be detected, the woman was in the eighth month of pregnancy, and for one month previous had had persistent headache, photophobia and muscular twitching. She was passing a fair quantity of urine, but it contained considerable albumin. The speaker made a diagnosis of impending uræmia and advised

immediate delivery and uterine venesection. Under chloroform anæsthesia, dilatation was easily effected, and within three-quarters of an hour he had performed podalic version and extracted a dead child. Then about thirty-two ounces of blood were allowed to escape from the uterus, after which the flow was promptly checked by the introduction of a uterine tampon of iodoform-gauze.

Dr. MARX said that in a paper which he had read some time ago, he advocated incisions into the cervix. Dührssen had reported thirty-six complicated labors in which he had incised the cervix with excellent results. Placenta prævia and eclampsia require such immediate action that a delay of half an hour might be enough to cause the death of the patient, and he thought on this account alone deep incisions into the cervix were better than the mode proposed by Dr. Grandin. The first case he reported was hopeless from the start; it was one of coma from uræmia and placenta prævia marginalis and accouchement forcé was tried first, but finding it impossible to dilate the os after working for three-quarters of an hour, he deliberately incised the os deeply in four directions, performed version, and extracted a child which had evidently been dead a few days. After active stimulation, the patient rallied slightly but died shortly afterward from cedema of the lungs due to heart failure. The second case was one of "accidental" hemorrhage due to a large uterine fibroid. The os was dilated so that it would admit two fingers, and he delivered a living child after doing the Dührssen operation. After injecting a saline solution into the mother, she recovered. In both cases within ten minutes he was able to effect delivery, and in neither case did the tear extend any further. The third patient was in her second confinement, and there was a transverse presentation. The membranes were ruptured about four hours before he saw her, but there had been no progress; the vagina was filled with the umbilical cord; the os was incised, indication—fœtal exhaustion, pulsation 80, and the child delivered alive, but its humerus was fractured. From the results obtained by this method in cases of great emergency, he thought it a better one than accouchement forcé.

Dr. MARX, in answer to a question from Dr. Polk, said that where the supra-vaginal portion of the cervix is still present a dilator or the finger is used until this portion merges into the lower segment, and then the incisions are made up to the cervico-vaginal junction.

Dr. POLK said that in a very large proportion of cases he had found the resistance to be above the cervico-vaginal junction, and as he had not dared to cut further than this, he had been compelled to resort to

dilatation. In those cases where the lower segment of the uterus is extremely rigid, incisions can not be made he thought with sufficient freedom to accomplish the purpose without certainly entering the body of the uterus. If aseptically done he was not prepared to say that this would be a great calamity, but it is a much more serious operation.

Dr. H. L. COLLYER agreed thoroughly with Dr. Grandin regarding the advisability of resorting to accouchement forcé in cases where there is every evidence of acute uræmia. Some time ago where a patient had nearly fifty per cent. of albumin with hyaline and granular casts, and who presented other symptoms of uræmia, he had not interfered and she recovered. More recently, in another case of this kind, occurring in a patient seven-and-half months pregnant, he had advocated the induction of labor, and he had been supported in this opinion by Dr. Lusk. This advice was followed, and both mother and child were saved. He advocated accouchement forcé in acute uræmia in preference to incision of the cervix, for in the majority of cases the cervix can be manually dilated within a half-hour and version performed.

Dr. MALCOLM McLEAN suggested that in a considerable experience it would be found that accouchement forcé could not be performed in a certain proportion of cases without injury to mother or child, and he thought that both Dr. Grandin and Dr. Marx had been singularly fortunate in their experience. It is not rare to find cases in which by other methods it can be effected inside of forty-five minutes, and it would be unwise to adopt accouchement forcé in every case of threatened uræmia or placenta prævia.

Dr. GRANDIN, in closing the discussion, said that when spasm occurs, it is above the internal os at what was formerly called Bandl's ring. This will not yield to ether, but it will usually yield under chloroform, because chloroform causes uterine spasm to relax. This is a very important point and, if remembered, he thought there would not be so many cases in which the cervix could not be dilated. He had yet to meet with a gravid uterus beyond the eighth month, where he had not been able to dilate manually in the presence of almost any complication which comes in obstetric practice, and he said this after an extensive experience in two very large maternity hospitals. The spasm which is to be overcome is not in the vaginal cervix, but in the lower uterine segment, and he would hesitate a good deal before extending an incision into the uterus. He would like to know what Dr. McLean did in such cases of emergency as those he had described. Resort to

hydrostatic dilators, etc., being a *slow* method, meant the loss of the child and possibly the woman.

Dr. MCLEAN replied that he put in a hydrostatic dilator and waited for Nature to produce the proper dilatation which no amount of manual effort would accomplish, and then he delivered by whatever method seemed most appropriate to the individual case. In his cases also both mother and child lived. His warnings were based not on theory but on a pretty extended obstetrical experience during a period of twenty years.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY,
TUESDAY, FEBRUARY 7th, 1893.

Abstract of Papers Presented on the Topic: "The Relative Value of
Certain Obstetrical Operations."

General Review of the Subjects to be Discussed.

BY EGBERT H. GRANDIN, M. D., OF NEW YORK.

Dr. GRANDIN expressed satisfaction at his good fortune in securing the coöperation of distinguished colleagues to place before the Society an impartial estimate of the limitations of the operations referred to; he knew no subject more timely or more worthy to be selected. It was a marked sign of progress in obstetrics that such a discussion is possible. It was not long ago that Cæsarean section was condemned except in cases where the birth-canal was so obstructed as to forbid even an embryotomy. It is only within the past few months that an operation, although a hundred years old, has seen the dawn of a new birth. He remarked that it would be his province to consider briefly certain of the causes which have rendered possible the elective surgery so surely gaining ground in obstetrics. He spoke of asepsis and antisepsis as terms synonymous with scrupulous cleanliness. Without cleanliness even embryotomy carried risk to the woman, but with it we are enabled to reject embryotomy and choose between Cæsarean section and symphyseotomy. The author referred briefly to the influence of the uterine suture in Cæsarean section and devoted more

space to the important subject of accurate pelvimetry, which he said renders elective surgery in obstetrics possible.

In regard to embryotomy on the living child he remarked: "Have we, indeed, reached the day when destruction of foetal life is not our bounden duty except when maternal life is jeopardized?"

The importance of practising pelvimetry and of recognizing the size of the foetus is a duty many of us still neglect, and yet the physician may be called upon to elect one or other of the obstetric operations—induction of premature labor, the forceps, version, symphyseotomy, the Cæsarean section, sometimes embryotomy. Exactitude of diagnosis is deemed requisite in other branches of medicine, why should it not be incumbent upon the physician who attends the pregnant woman?

The issue is the same, well-being or ill-being, life or death. Nay, it is greater, for not alone is the woman's welfare at stake but that of the child. Aside from a casual examination of the urine the patient is too frequently allowed to go without further examination until she is found in labor and then the investigation is confined to the recognition of the presenting part. All this is reprehensible. The time to determine the indications for the operations referred to is before the advent of labor and the only way we can secure the necessary knowledge is through pelvimetry. It is not alone necessary to determine the size of the birth-canal but the size, as well as can be done by the crude methods at our disposal, of the child which must pass through this canal. Following this obviously necessary plan the physician will not attempt impracticable procedures nor will he delay adopting a plain indication until the harm is so great as to be beyond remedy.

Dr. Grandin summed up the matter by stating that the methods of the maternity hospitals must be transported into the private practice of those whose lot it is to practise among the very poor, as well as that of their better remunerated brethren. The opportunity to elect the operation obviates in a great measure the causes of ill-success in saving viable children without lessening the chances of the mother. Cæsarean section and symphyseotomy were both designed to avoid mutilation of the living child. The accumulated data of the past show us very clearly the chances, in a given case, of saving the child without subjecting the woman to extra special risk, through resort to one or other operation. He adds: "Whilst I am not in sympathy with those who claim that under no circumstances should the living foetus be sacrificed, I am prepared to contend that the exceptions to this rule are to-day very few. The technique of the Cæsarean section has reached such perfection

that in more than one maternity hospital it has been over and again proved that the risk to which the mother is subjected in this operation is no greater than that which embryotomy entails. Indeed, in one of the maternities with which I am connected, the mortality rate in the same interval from Cæsarean section was 0 per cent, whilst from embryotomy it was 100 per cent.

The question is not one of sentimentality nor is it one of religion, but it is the question of doing our best by two lives instead of simply ignoring one. The question should be regarded simply from a scientific standpoint.

Embryotomy; its Prognosis and Limitations.

BY J. CLIFTON EDGAR, M. D., NEW YORK.

Dr. EDGAR denied the statement that embryotomy is usually attended with as much danger as Cæsarean section and remarked that even in unskillful hands and particularly in those unaccustomed to cœliotomy the former operation was, by long odds, the safer where the absolute indication for Cæsarean section does not exist. Leopold lost 2.8 per cent. out of seventy-one craniotomies and Fehling 4.3 per cent. out of twenty-three craniotomies. It is interesting to compare these results with those obtained by Hecker in pre-antiseptic times who lost 56.5 per cent. out of twenty-three cases from 1859-79. Zweifel gives sixty-eight cases with five deaths; two of which were due to previous rupture of the uterus and three to eclampsia. Zweifel states that he himself never lost a case of craniotomy. John Phillips reports sixteen successful cases for various indications and adds that ten of the fœtuses were probably alive before the operation. Lowers reports six cases of craniotomy done for pelvic contraction. In four instances the conjugate was $2\frac{1}{2}$ per cent. or less. This author concluded that Cæsarean section should be undertaken in London, where the operation in the hands of "operators of acknowledged competency" still gave a mortality of from twenty to fifty per cent. as a necessity and not as an operation of election. The mortality from embryotomy is rendered higher than it would otherwise be because it is resorted to after unsuccessful attempts at delivery by forceps version, or traction; and for this reason the apparent paradox, that the mortality has at times seemed greater in slight cases of contraction at the inlet than in more serious degrees of narrowing, is explained. Where the fœtal head is larger than usual and the pelvis is a trifle undersized embryotomy does not give a higher rate

of mortality than two to three per cent. at most; when the true conjugate is two and one-quarter inches, or under, the mortality immediately rises to 20 or 30 per cent.

The writer reported three cases where he had performed embryotomy on the dead fœtus. In the first case rupture of the uterus was imminent. It was a case of partially adherent uterus to the abdominal parietes, the result of a previous puerperal peritonitis. The second case was one of flattened pelvis where compression, shoulder and jaw traction, and the forceps failed to deliver the after-coming head. The third case was of a moderately contracted pelvis and a large head, and the first stage had been allowed to continue without interference until the child died. All these cases made uninterrupted recoveries.

In speaking of the difficulties and dangers of craniotomy Dr. Edgar, in teaching obstetric operations upon the manikin, had found that even with the lesser degrees of contracted inlet failure followed after the use of the cranioclast, scissors or cephalotribe. The danger lies not so much in the perforation or decapitation as in the extraction of the mutilated fœtus. It is difficult to extract a fœtus through a cervix perhaps imperfectly dilated and œdematous from prolonged pressure, and a pelvis too small to render a cephalotribe safe and so small that even a cranioclast is with difficulty adjusted.

Dr. EDGAR spoke of the rareness of the cases in this country where absolute indication for operation existed.

In stating the indications for embryotomy on the dead fœtus he said it was required in all cases where the absolute indication was absent and the delivery of the fœtus undiminished in size would result in danger to the mother.

The indications for the destruction of the living child are formulated as follows: embryotomy is indicated on the living fœtus during labor whenever the relative indication exists and the physical signs indicate that the life of the fœtus is practically lost. In certain rare instances the condition of the mother is such, (temperature, pulse, thinning of the lower uterine segment), whether from repeated unsuccessful attempts at delivery or from prolonged labor, as to render embryotomy by far the safer operation in cases of obstructed labor due to monstrosities. Referring to symphyseotomy as a substitute for embryotomy he says: "Whether we shall lend ourselves to the destruction of a living fœtus is quite another question. To-day we can offer to patients in such cases of contracted pelves where the true conjugate is not under two and five-eighth inches, (Morisani's minimum conjugate for the

operation), an operation in which the chances of securing a living child are nine out of ten and the maternal mortality is — nil.

He states that subsequent experience will be necessary to determine how far symphyseotomy will limit the performance of embryotomy and even Cæsarean section, but a large portion of the sections done in this country and Europe are within the limits of pubiotomy.

In his concluding remarks the author states: "it is impractical to lay down any positive rules for the performance of either cœliotomy or embryotomy based on pelvic measurements, if we leave out of consideration the size of the foetal head."

The Limitations of Cæsarean Section.

BY R. A. MURRAY, M. D., OF NEW YORK.

The introduction of the Porro operation, or its modification the Porro-Müller, was a marked advance, but its mortality was so great that the new Cæsarean has grown greatly in favor. In determining the limitations of Cæsarean section it must be premised that the operation is elective and the operator capable. The three causes of failure—shock, hemorrhage and sepsis—may be guarded against in great part. The first by timely operation, the second by constricting the cervix by manual compression during the operation and by obtaining firm contractions of the uterus, and the third danger, that of sepsis, by thorough asepsis.

The sutures should be placed in two rows making a deep and a superficial row, with enough peritoneal sutures to shut off the wound from the peritoneal cavity.

The operation is absolutely indicated in any pelvis where the diameter is below two and three-quarter inches, (true conjugate), with a living child. In cancer of the cervix where to be successful it should be done before labor, in the Robert or Naegele pelvis which is unsuitable for symphyseotomy, and again where the tumor so contracts the birth-canal as to render the passage of a living child impossible.

In speaking of the infrequency of deformed pelvis in America and the high rate of mortality attending the operation he contends that the American child is larger and heavier than the European child.

As regards the statistics of Cæsarean section in the hands of good obstetricians Zweifel had thirteen cases consecutively with one unfavorable result. Seven operators in Leipsic had thirty-six cases in the eleven years prior to Zweifel's fatal case, and lost but two mothers and two children. Dr. Kelly has had four successful cases. Lusk saved

four patients out of six cases. In the Maternity Hospital there have been five successful cases by four different operators.

In regard to symphyseotomy, Murray believes that it will find its best field, in the hands of American operators, in moderate deformities of the justo-minor type of pelvis with three and a half to four inch conjugate, or in bad presentations where the head is large. He speaks of a recent case at the New York Maternity with a true conjugate of two and three-quarter inches. The patient was twenty-eight years of age and the child weighed seven and a-half pounds with a bi-parietal diameter of four and a-half inches. In this case, although pubiotomy was preceded by version, the author was of the opinion that a section would have given a better chance of surviving both to the mother and to the child. The following are his conclusions:

1st. Cæsarean section should always be done where the true conjugate is below two and three fourth inches.

2nd. It should be done in a Robert or Naegele pelvis with marked deformity or where there is fixation of one or both sacro iliac synchondroses from disease; cases in which pubiotomy will be ineffective.

3rd. It is the best operation with diameters even larger than two and three-quarter inches, when the child's head is large and could not probably pass with a living child if pubiotomy were done.

4th. Where tumors or exostoses are present the Cæsarean section or Porro's operation is the best.

5th. In cases of cancer of the cervix it should be chosen rather than pubiotomy and should be done before labor sets in so that no sepsis may result.

The size of the child's head, in moderate contractions at the superior straight, will oftentimes be the determining factor, as to whether an elective Cæsarean section or pubiotomy be the best.

The Clinical Limitations of Symphyseotomy.

By CHARLES JEWETT, M. D.

(For original paper see June number.)

The abstract of Dr. JAMES E. KELLY's paper, with cuts, will appear in the August number.

DISCUSSION.

EDWARD P. DAVIS, M. D., OF PHILADELPHIA. In discussing the very interesting papers which have been read, I cordially agree with Dr. Grandin in his plea for the practice of pelvimetry. We shall never make substantial advances in the practice of scientific obstetrics until

our examination of the pregnant patient embraces the measurement of her pelvis and a comparative estimate of the size of the pelvis and its contents, together with a determination of the presentation and position of the child. This can be so done in private practice as to offend in no sense a fastidious patient, nor to expose her to discomfort or pain: an appointment may be made, either at the physician's office or the house of the patient. She may lie comfortably upon a bed or couch, the abdomen and pelvis covered by one thickness of pliable linen only; the distance between the anterior superior spines, the outermost points of the crest of the ilia, and the external conjugate, may then be measured in a very few moments and without exposing the patient. While the thighs are flexed upon the pelvis, the presenting part may be gently brought to the brim of the pelvis by pressure, and an endeavor be made to cause it to enter the pelvic inlet.

As regards embryotomy upon the living fœtus, we know of no condition where the operation is justifiable upon a normal living child, and in the light of our modern knowledge of symphyseotomy, embryotomy, we trust, will cease to be considered a proper expedient.

Dr. Edgar's estimate of the danger of performing embryotomy in highly contracted pelvises is justified in my experience. When the antero-posterior diameter is less than seven centimeters and the child fully developed, danger to the mother is less in a well-performed abdominal section than in the piece-meal extraction of the fœtus. As regards the indications for embryotomy, we know of but two, namely, the presence of a dead fœtus too large to pass through the pelvis without danger to the mother, contained in a pelvis whose antero-posterior diameter is seven centimeters or greater at the brim. In the case of living monsters, embryotomy is also justifiable in preference to the dangers resulting from the effort to deliver a very large head through a normal pelvis. There should be no hesitation in performing embryotomy upon monstrosities, for in these cases congenital abnormalities in development are frequently found in the nervous system and other portions of the body which would render the subsequent life of such a being either an impossibility or a burden. In a case under my observation a year ago, an enlarged globular head was found above the brim of the pelvis in a woman who had been subjected to great privations and had lived amid unhygienic surroundings. Hydrocephalus was diagnosticated and the belief was expressed that the fœtus would be found otherwise deficient in normal development. Although the heart-beats were strong and regular, the child was delivered by craniotomy and the use of the

cranioclast. It was found to be without eyes and having other serious defects in the structure of the nervous system and bony development of the skull. The patient subsequently passed from her condition of poverty to one of comparative comfort and plenty and was delivered a short time ago of a healthy well-formed fœtus.

Dr. Murray, in his interesting estimate of the field for Cæsarean section, refers to the conditions necessary for success. They were outlined several years ago when the operation was obtaining wide publicity. Three conditions are requisite for the successful performance of this operation: that the patient be secured first-hand, before she has been injured by unsuccessful attempts at delivery by forceps or the performance of version; that at least one intelligent assistant be available; and that antiseptic precautions be intelligently and faithfully observed. To these are often added adequate closure of the uterus by suture after the delivery of the child. The term "pubiotomy" may be well applied to cases where the pubis is separated in some portion of its continuity and not at the symphysis. A symphyseotomy may occasionally become a pubiotomy, as in a recent case reported by a western practitioner in which the use of a finger-saw was necessary to divide a resisting symphysis.

With the advances made in the treatment of the fibroid uterus, the Cæsarean section in pregnancy complicated by cancer and fibroid tumors will be gradually supplemented by total hysterectomy, and the results of the modern operation for removal of the entire uterus would justify such an advance.

In examining several hundred patients of different races and nationalities, I have found contracted pelves not so infrequent as text books lead one to suppose; on an average, one in fifty or seventy-five women display some abnormality in the pelvis which requires consideration by the obstetrician in the prognosis and treatment of labor. It is common, in my observation, to find in the negro race the pelvis deficient in its transverse measurements, although little diminution is observed in its oblique and antero-posterior diameters.

The attempt to replace Cæsarean section by symphyseotomy will prove a mistake, and seriously impair the value of both operations. If, after symphyseotomy, the fœtus must be delivered with such difficulty and pressure upon the child as to endanger its existence and the well-being of the mother, little has been gained by the operation.

Dr. Kelly's interesting paper upon the anatomy of the symphysis pubis and his remarks concerning the distribution of bloodvessels to

this part are exemplified and corroborated in the recent literature of the subject; thus, Törngren, in performing symphyseotomy, was annoyed by free hemorrhage from veins near the symphysis. He found it necessary to divide the sub-pubic ligament to secure proper expansion of the pelvis and brought the parts together subsequently by the temporary application of the wide portion of Esmarch's bandage.

As regards Dr. Kelly's estimate of the gain in pelvic diameters resulting from division of the symphysis, we are reminded of the interesting observations of Biermer of Breslau who severed the symphysis pubis in one non-puerperal and three puerperal pelves: stating his result briefly, the ratio of increase in pelvic diameters may be practically expressed by one, two, and three, of which one may represent the antero-posterior diameter; two the oblique; and three the transverse. The right sacro-iliac joint gave evidence of separating before the left; after the symphysis was separated, a spontaneous gaping of the ends of the pubis occurred four centimeters in extent. When the distance between the severed portions of the joint was nine centimeters, the right sacro-iliac joint yielded with audible crepitation. The finger detected an apparent separation in this joint of one and one-half centimeters. When the symphysis was separated ten and one-half centimeters, the left sacro-iliac joint separated with a similar interval between its surfaces perceptible to the examining finger.

Dr. Jewett has spoken of the clinical limitations of symphyseotomy, I agree with him in his recommendation that cases of difficult delivery with posterior rotation of the occiput in slightly contracted pelves may require this operation. I think, however, that the present tendency is to recommend symphyseotomy for those cases in which it is oftentimes least indicated, namely, considerably contracted pelves where the Cæarean section will give best results. In cases, however, of disproportion in size between child and pelvis, although the pelvis may be normal in its measurements, infant mortality and morbidity among mothers will be lessened by the judicious performance of symphyseotomy. This has been impressed upon my mind by two cases seen recently in consultation; in one, although the head was delivered by forceps with comparatively little difficulty, the size of the shoulders was such as to render the delivery of the foetus without serious injury impossible. In another, a healthy multipara, whose previous labors had been normal, delivered herself without assistance of a large male infant; the labor was noticeable for strong uterine contractions and for marked elongation of the foetal head: the child perished thirty-six hours

after delivery of visceral hemorrhage, extensive extravasations of blood being found in the viscera and large cavities of the body. If the present estimate of the harmlessness of symphyseotomy as an operation be true, the life of the latter infant would have been saved with no essential increase in the risks to the mother. We lack as yet sufficient data for a critical judgment of the indications for symphyseotomy, but certainly if the present optimistic estimate of its value be true, it should be performed in the interests of the child in cases where the life of the foetus is possibly the only life in immediate danger.

STATUS OF GYNÆCOLOGY ABROAD.

BY H. N. VINEBERG, M. D.

Deciduoma Maligna or Sarcoma of the Chorion. First Case of Recovery.

Dr. S. GOTTSCHALK (*Berl. Klin. Woch.*, 1893, Nos. 4 and 5) reports a case of sarcoma of the chorion in a woman forty-two years of age following an abortion of a six or eight weeks pregnancy. In spite of thorough curettage done at three different times, the woman suffered from profuse hemorrhage, fever and general debility. The uterus and adnexa were removed per vaginam, the woman making a good recovery. This is the first case, according to the author, that has recovered from this disease, and forms the seventh case in literature. Two microscopical drawings accompany the paper. The clinical signs of this rare affection are: intermittent and profuse uterine hemorrhages, great emaciation, and early metastases of the lungs. All of the recorded six fatal cases ran their course in six to nine months. The author prefers the name "sarcoma of the chorion" to deciduoma maligna and dwells at some length upon the differences between this affection and other affections of the chorion.

A Case of Double-Sided Fibromyoma of the Pelvic Connective Tissue.

UEROW (*Centbl. für Gyn.*, 1892, No. 48) publishes a case of this kind. The patient was forty-four years of age and presented a torn perineum with a slight rectocele and an enormous cystocele. Beneath the anterior prolapsed vaginal wall a tumor the size of a hen's egg was

made out somewhat to the right of the median line. The tumor on the left side was the size of an apple. Both tumors were removed by an incision through the wall of the vagina. They were in no way connected with the uterus, but lay imbedded in the pelvic fascia and connective tissue.

Two Cases of Symphyseotomy.

This obstetric operation is rapidly extending over the civilized world. In the *Centbl. für Gyn.*, 1892, No. 49, two cases are reported from Sweden by Törngren, of Helsingfors. In one, a IX-para, the first four births were normal. In the fifth, sixth and eighth, version had to be done and the foetus was still-born in each. The seventh birth was normal, but the child was unusually small. In the ninth labor symphyseotomy was performed and a living child extracted, but the mother died in forty hours in a condition of collapse. In the second case the patient made a good recovery and a living child was obtained.

Ectopic Gestation.

G. REIN (*Centbl. für Gyn.*, 1892, No. 50), on the strength of seven cases upon which he had operated, expresses the following views:

Three varieties of extra-uterine gestation exist:

1. Abdominal.
2. Ovarian.
3. Tubal.

In the abdominal variety the foetal sac either grows free in the abdominal cavity, forming a pedicle, or develops subperitoneally or within the ligament. The ovum may undergo the same pathological changes as in uterine gestation. In one of the author's cases the gestation had gone to full term, the foetal sac developing within the ligaments, and a living child was obtained through cœliotomy.

The Treatment of Obstruction of the Bowels after Cœliotomy.

KLOTZ (*Centbl. für Gyn.*, 1892, No. 50) met with thirty-one cases of obstruction of the bowels in four hundred and twenty-one cœliotomies, that is five and one half per cent. In six of these cœliotomy was done the second time and two of the patients were saved. At the operations the coils of small intestine were found adherent to the wound of the pedicle. The adhesions were slight and easily separated. So much so that the author thinks that peristaltic movements of the bowels would be sufficient to remove them. He brings this about by washing out the stomach, and if this fails he washes out the stomach

again and pours into it 3 iss of castor oil. Of course this treatment is applicable only in the early stages, as soon as the diagnosis is established. He applies the treatment on the fourth or fifth day after the operation—if symptoms of obstruction are present.

Gerdes' Eclampsia Bacillus.

HAEGLER and FEHLING (*Centbl. für Gyn.*, 1892, No. 51), in two separate articles, criticise Gerdes' investigations on the pathology of eclampsia, and hold that he has not satisfactorily proved that the pathogenic factor of eclampsia is a bacillus. Haegler has been examining the blood and urine of all patients suffering from eclampsia admitted into the Basle Clinic for the past three years and has never been able to find the bacillus described by Gerdes. The examinations were made either during life or a few hours after death, and besides other micro-organisms, the one most frequently found was the proteus vulgaris. Fehling claims that we must still look upon diseases of the kidney substance as the pathological factor of eclampsia.

Ovariectomy in Japan.

OMORI and IKEDA, of Fukuoka, Japan, (*Centbl. für Gyn.*, 1892, No. 52), report one hundred cases of ovariectomy performed by them in the Fukuoka Hospital, with five deaths. Strict antisepsis was observed. A point of interest is the frequency of dermoid cysts in Japan women. Of one hundred and fifty cases operated on by the authors there were thirty-six cases of dermoid cysts. A point worthy of imitation is the manner in which they satisfied themselves that their hands were rendered aseptic. The hands and arms were first washed with warm water and soap, then painted all over with a one-per-cent. solution of fuchsin, and again washed until every trace of the coloring matter was removed. They were then immersed for a few moments in absolute alcohol.

[This seems a more crucial test than smearing the hands with iodoform oil and washing until the smell of iodoform is removed, for the acuteness of smell varies exceedingly in different individuals. Besides, the olfactory nerves retain for some time the impression of an odor after the cause has been removed.]

Surgical Interference in Severe Pelvic Neuralgia.

L. G. RICHELLOT (*L'Union Medicale*, 1892, Nos. 139 and 140) reports sixteen cases of obstinate pelvic pain with no appreciable lesion, resisting all therapeutic measures in which he resorted to surgical interfer-

ence. In four cases castration was first done but, the pain continuing, vaginal hysterectomy was performed, and the pain relieved. In nine cases total extirpation per vaginam was done at the outset with relief in all but one case. One case of vaginal hysterectomy proved fatal, to the surprise of the operator, as the operation (to him) is such a simple one, requiring only ten to fifteen minutes to perform, and in one case it actually took only five minutes.

[We review the paper in illustration of what reckless surgery can lead to in the minds of crude thinkers. With only one or two exceptions, all the organs removed were perfectly normal, and yet the author points with pride to the triumphs of modern gynæcological surgery. It is not even stated what therapeutic measures had first been tried and had failed, but the accommodating phrase, "all therapeutic measures had been resorted to", is employed. No sooner is "Jack the Ripper" routed and beaten at one point of attack than he changes his base of operation and whips out uterus, ovaries and tubes with one sweep of the knife in less than five minutes!! Hurrah for modern gynæcological surgery!!!]

Extra-Uterine Gestation Complicated with an Ovarian Tumor.

Stern (*Münch Med. Woch.*, February 23d, 1893) relates the case of a patient twenty-eight years of age in whom a tumor the size of a child's head was found on either side of the uterus. The woman suffered from irregular hemorrhages and from attacks of pain but did not pass any decidua. At the operation the tumor at the right side proved to be an ovarian cyst, that on the left a tubal gestation. Both were removed and the patient made a good recovery.

The Condition of the Endometrium in Fibro-Myoma of the Uterus.

Dr. OSCAR SEMB (*Archiv für Gyn.*, B'd 43, Heft III.) examined microscopically the endometrium of twenty-three myomatous uteri extirpated by Leopold in the Dresden Clinic. Eight cases were subserous fibroids. In three of these the endometrium had undergone hypertrophy, which was partly diffuse, but preponderately glandular. In two cases the endometrium was slightly inflamed, without any other marked change. In the remaining three cases there was severe endometritis, the endometrium presenting in part a proliferating process and in part a shrinking process with atrophy of the mucous membrane. In eight cases of interstitial myoma there was a uniform or glandular hyperplasia in five instances.

In one case the hyperplasia of the endometrium was secondary to a commencing carcinoma, and in another there was a peculiar glandular proliferation giving the impression of malignancy.

In six cases of submucous growths the endometrium covering the tumor always presented a high degree of atrophy.

It will be seen that a uniform condition of the endometrium in fibromyoma of the uterus does not obtain. Still the following deductions are justified:

1. The endometrium in most cases of myoma of the uterus undergoes hypertrophy without any inflammatory process—this is in part uniform, affecting equally the stroma and the glands, and in part preponderatingly glandular.

2. In the further course of the growth secondary changes in the endometrium often occur, brought about by pressure of the tumor, an onset of inflammation or other complications. The latter may produce a complete retrogression of the hypertrophy.

None of the mentioned changes of the endometrium is regularly attended with hemorrhages. But on the other hand, the hypertrophy of the muscular tissue with hyperplasia of the blood-vessels sometimes accompanying myoma of the uterus is most frequently the cause of hemorrhage. Carcinomatous degeneration was found only once in twenty-three cases. This corresponds with the results of other observers quoted by the author, who, in consequence, feels justified in arriving at the following conclusion:

Carcinomatous degeneration in myoma of the uterus is not more frequent than in every chronic nutritive disturbance of the uterus.

Pregnancy Complicated with Fibroids.

HOFMEIER (*Muench. Med. Woch.*, 1893, No. 11) reports the case of a woman forty-four years of age who became pregnant after an interval of fifteen years' sterility. She had several fibroid growths varying in size from a closed fist to that of an adult head. As the symptoms were not pressing he decided to wait, and the woman was delivered of a full-grown child at term. The growths increased in size during gestation, but pressed out of the pelvis and into the abdomen. They did not, therefore, interfere with the labor and afterwards, under ergot treatment, diminished in size, so that after a few months they were easily removed per vaginam. In support of the expectant plan of treatment the author analyses thirty-six cases that came under his own

observation in which spontaneous abortion took place only six times. The danger to the mother consists in infection, which now-a-days can be easily averted, and in post-partum hemorrhage, which can readily be controlled by the iodoform-gauze tamponade. The author expresses his views as follows :

1. Spontaneous abortion occurs seldom.
2. Induced abortion is never to be resorted to unless the indications are very urgent. Cæsarean section is but seldom indicated.
3. A later operation is to be undertaken only some time after the labor, when the growths have again decreased in size.

The Question of Eclampsia Bacilli.

DÜDERLEIN (*Centbl. für Gyn.*, 1893, No. 1) after Gerdes' publication undertook anew the attempt to cultivate the bacilli found by Gerdes in eclamptic patients. Eight cases coming under his observation furnished the material. The inoculating material was taken as follows :

1. The urine from all the mothers.
2. The maternal blood in four cases.
3. The foetal blood in all cases.
4. From the placenta in all the cases.
5. The foetal urine in two cases.

In all instances the result was negative. On the strength of this experience he agrees with Hägler and Hofmeister that the so-called "eclampsia bacilli" cultivated by Gerdes from the tissues of cadavers are not the cause of eclampsia.

A New Method of Total Extirpation of the Uterus.

HERZFELD (*Centbl. für Gyn.*, 1893, No. 2) describes at length his method of operating, which he claims has advantages over that of Hochenegg and Kraske in that a much smaller part of the sacrum needs to be resected. The histories of three cases are given in detail in which he operated according to his method. For the details of his procedure we must refer our readers to the original article.

Partial Resection of Diseased Ovaries.

A. SIPPEL (*Centbl. für Gyn.*, 1893, No. 3) reports the following case, which is instructive and interesting. A woman æt. thirty years

had to be operated on for a double ovarian tumor. She had given birth to a child five and a half years before, but was desirous of having more children. The right-sided tumor, the size of a child's head, showed no normal ovarian tissue and had to be removed *in toto*. That on the left side, the size of a goose egg, showed a strip of healthy tissue along the tubal border. The diseased portion of the ovary was resected; the remaining part measured three to four mm. in thickness and four cm. in length and was sewn up with catgut sutures. The patient made a good recovery. Her menses were regular until she became pregnant fifteen months after the operation. She went to full term, was delivered of a healthy child, and made an excellent recovery.

Contribution to the Knowledge of Tubal Ovarian Cysts.

VON ROSTHORN (*Centbl. für Gyn.*, 1893, No. 3) in a lengthy and interesting article sums up as follows:

1. Inflammatory changes in the uterine adnexa and their peritoneal covering must be looked upon as forerunners of tubal ovarian cysts.
2. The attempt of some investigators to attribute them to congenital "ovarian tubes" has not been successful.
3. Genuine ovarian cysts and the so-called follicular cysts may come into communication with a previously adherent and diseased tube either through suppuration or pressure atrophy of the dilated intervening wall.

A Case of Soft Chancre with Gangrene of the Vagina.

M. GÖRDES (*Centbl. für Gyn.*, 1893, No. 4) relates a case of this kind. The infection had taken place probably five weeks before. The labia were highly oedematous and the walls of the vagina in a state of gangrene. Under narcosis the vaginal mucous membrane was thoroughly curetted and considerable gangrenous tissue removed. The patient died comatose four days later. The autopsy showed the kidneys to be more than double their natural size and death was due to uræmic coma.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

AUGUST, 1893.

OPERATIONS UPON THE UTERINE APPENDAGES WITH
A VIEW TO PRESERVING THE FUNCTIONS OF
OVULATION AND MENSTRUATION.¹

By W. M. POLK, M. D.

New York.

This is not a new subject, but it has never been discussed at length by this Society. I therefore venture to present it, hoping for that candid criticism for which this body is noted. If the matter has a standing in court let us know it, if not, let it be relegated to the loft along with other questions gone before. When I brought this question up in the meeting of 1887, you were not prepared for discussion except upon its generalities; so that little was accomplished. Previously it had been suggested to the Society of Physicians and Pathologists at Washington in 1886 and to the New York Obstetrical Society early in 1887. It was evident, however, that in this country at least, operators were not prepared for its refinements. They were too busy establishing the broad principles of peritoneal surgery; while the opposition could see no further than their well-worn and somewhat worthless plan of non-operative interference. How far we have now gotten will no doubt appear in the discussion to follow.

In dealing with diseased appendages we are faced by the need for radical operation to restore health, or, it may be, to preserve life. *Can these indications be met without sacrificing menstruation and ovula*

¹ Read before the American Gynecological Society, May 16th, 1893.

tion? We know the rule now established, and yet would not the work be better done if the preservation of function were kept more in view?

We hold that this function is an aid rather than a hindrance to female life provided it can be freed from inordinate distress, and surely the measures for the accomplishment of this end are by far the most interesting questions in our field of work to-day. The safety of peritoneal surgery is established; the means of dealing with ectopic gestation and fibroid tumors may be said to be about determined, the few remaining problems in each of these procedures being of minor detail and well on the way to solution. But here is a question of widest scope, far-reaching in importance, not merely as a mechanical problem of surgical technique but rather as a problem in physiology, involving the restoration or rather preservation of something upon which may hinge the greatest question of individual life. And in this lies the very kernel of this whole question of dealing with the appendages—for if you are prepared to maintain that the average woman is as well off mentally and physically without the functions of menstruation and ovulation as with them, then this paper has no place before you. Presuming, however, that there is at least a doubt here, permit me to clear the field for the statement which I shall make.

The broad proposition must be enunciated here as elsewhere—that when the extent of disease is such as to destroy the organ, or when the nature of the disease is such as to insure its extension, the most radical removal must be made. This eliminates from the question ovarian tumors, especially dermoid cysts, pelvic abscesses, tuberculosis and cancer, and confines us to simple salpingitis and its accompaniments, to smaller simple ovarian cysts in which some of the organ remains intact, to hydrosalpinx and to hæmatosalpinx. Just what these conditions are every one here knows, so that I shall not attempt any differentiation of the varying anatomical peculiarities of each. My object is to provoke discussion, and I purposely omit everything not essential to a bare statement of the question, so as to allow all the time possible for criticism.

The Tubes. My observation is, in a large number of cases of salpingitis, that the amount of disease present is insufficient to threaten the patient's life, and in very many the tube, as a whole, is insufficiently diseased to forbid its return to efficient duty. This applies to instances of catarrhal salpingitis (endosalpingitis) with open infundibula; such tubes, I believe, should not be removed.

Instances of salpingitis in which the parenchyma of the tube is also

involved (thickened to a greater or less extent and yet the infundibulum is open) form a small contingent of the whole, and if the thickening of the tube-wall can be set down to an acute inflammation (as it can in most cases) present at the time of the operation in and around and about the tube, I think such tubes can be allowed to remain. But, as the uterus is the source of inflammation-supply in all such cases it should be at once cleansed, curetted, and packed with gauze.

The adhesions here are always unorganized recent lymph and may be expected to disappear in the face of a thorough cleansing. If organization should result, however, it is far from assured that the tube will be so crippled as to be a source of danger or even ill health. Just here it is well to say that operations should not be performed in the face of an acute inflammation of the parts in discussion, except it be to check a process which threatens the patient's life. Then all such questions as the preservation of the structures vanish, the life of the whole is paramount. In the absence of such emergencies, however, delay will permit resolution in some places, even though it provide opportunity for organization in others, and if the organized adhesion be without ill effect, operation may be avoided, but if they produce symptoms, then at least they will have been differentiated and can be directly dealt with. (I instance a case recently operated upon in which a retroverted uterus was, together with its appendages, imprisoned by organized adhesions. The infundibula being open and tubes in general with the ovaries being in good condition, nothing beyond a separation of the adhesions, a hysterorrhaphy, and a curetting and packing of the uterus was done. The therapeutic result was all that could be wished and the case is one of several.)

Touching cases of closed infundibula in which the tubes, aside from that defect, are in fair preservation, I have been guided by their contents and the kind of closure present. If distended with fluid of any kind they are sacrificed as in cases of so-called pyosalpinx, hæmato-salpinx, and hydrosalpinx. If the closing adhesions are organized they (the tubes) are also sacrificed, because in all of these cases the inner lining of the infundibula is so changed as to make retention of the patency of the tubes more than doubtful. The exact condition of this lining which is favorable to the retention of this patency is unknown to me, however, because I have had no opportunity for subsequent examination of a case treated after this plan. My practice, therefore, has rested upon analogy. If the tube is not distended and is closed

by recent lymph I open it, approximate the outer and inner coats, wash it out with plain water, and return it to the pelvis.

Any one doing much pelvic surgery soon learns however that the limit here fixed for the retention of closed tubes, affords in that direction a narrow field for the operator. Still in working out problems one must try to solve them as they come up. This is the solution I found for the condition in question, and the therapeutic results in cases coming under the proper heading have been good enough to satisfy me and, more to the point, satisfy the patients.

Tubes distended with muco-pus, blood, or sero-fluid, are to be removed, and it should be stated that in general the entire tube should be removed, dissected out to the cornua. I say in general, because in some of my cases *where the ovary was in a healthy state* I have cut off the hæmatosalpinx leaving all the undilated tube. The case of pregnancy after removal of the hæmatosalpinx, to be narrated, was one of these. When the tubes are thus cut off the inner coat protrudes and in two instances, one in the practice of our associate, Dr. McMonagle, and one here narrated, an ovum found admission. Whether these cases are always to remain phenomenal only the future can tell.

The Ovaries. Leaving now the tubes and turning to the ovaries, we reach the pivot of all that has been written about the tubes. Because if the ovary is sufficiently diseased to demand removal the refinements of tubal surgery may be brushed aside. The tube should go with the ovary, and removal of both in their entirety should be the rule. But should the ovary go with the tube? In other words, suppose you have a healthy ovary with a pyo-hæmato- or hydro-salpinx, should the ovary be removed along with the tube? My experience says decidedly "no." I have now ten cases dating back one, two, and two-and-a-half years, and every one of them has scored a good result; one having given birth to a child. Of three more recent cases each has done well. And in saying "well" I mean they are as far from discomfort as the best cases of complete removal of the appendages and they continue to menstruate. So far then as the ovary is concerned, my experience teaches that no matter what may be the fate of the tubes, not only should all sound ovaries be left but every effort should be made to preserve to the woman as much sound ovarian tissue as possible—in this matter following Schroeder's well-known suggestion. I take it for granted, you understand, that the essential matter in this question of

the ovary, is the maintenance of menstruation and ovulation because of its effect upon the physical and mental well-being of the patient. Sterility for the present is subsidiary.

The Adhesions. In a large number of cases of disease of the tubes and ovaries we have to deal with the question of adhesions. These are the product of the peritoneum, the result of its effort to protect its territory against the inroads of an inflammation-excitant, and they have the same relation to the process as circumscribing exudates of lymph have elsewhere. They represent the lymph which undergoes organization, are of course foreign to the situation, and according to their connections are disturbers of the proper action of the organs to which they are attached. These adhesions may so imprison the appendages that in time, aside from any other influence, they may destroy them. If, therefore, as in the case above narrated, these appendages be in fair condition, the existence of even organized adhesions is no indication for their removal. The adhesions can be cut away, not merely divided, and most excellent results will be secured; this I have proven repeatedly.

From all this it will appear, I maintain, that in dealing with diseased appendages as above defined, one should consider separately the state of the ovary, that of the tube and the condition of their surroundings as revealed in the amount and situation of the adhesions. Paramount however is the state of the ovary for, as already said, if that cannot be retained, nor any part of it, no time need be wasted in studying the effects of adhesions, or the condition of tubes. Radical removal of all is the only course to pursue.

At the risk of repetition and yet for the purpose of making myself plain, I will say that I am positive in my convictions as to the advisability of leaving sound ovarian tissue in cases of women who have not reached the menopause; the necessity for this diminishes as we approach the menopause but, in general, it may be said that under thirty-five it should be done whenever possible.

The Interior of the Uterus. The treatment of the interior of the uterus is of the utmost importance in every one of these cases. To make an operation for the conservation of the appendages, and leave untouched the source of the infection which has crippled them, is to my mind folly; it simply means incomplete work. Therefore, I urge that in every case the uterus should be dilated, curetted with a sharp curette, and then packed with as much gauze as it can possibly be made to hold. This clears the field.

The Operations. A word now in reference to the manner of operat-

ing upon these ovaries and tubes. When the ovary is merely the seat of the small cysts which we so commonly see scattered over the surface, ignipuncture with a fine cautery-point seems the best procedure. When larger cysts prevail, enucleation with subsequent cutting away of the excess of sac-wall and then turning in the edges with the Lembertstitch is the proper course. Or else a V-shaped section taken out longitudinally may be made, the surfaces being brought together with two rows of sutures, one deep, the other superficial; the latter being introduced after Lembert. One cannot always determine the state of an ovary by its external appearance, but free puncture with the aspirating needle will give the needed information. If not, incision may be resorted to, the incision being closed as in the case of the V-shaped exsection.

In removing a tube when the ovary is left, we deal with its attachments in the manner adopted for the removal of a portion of intestine. Tie, in one or more sections, the meso-salpinx, when the entire tube is removed tie also along the line of its attachment to the broad ligament; then cut it away, resorting to enucleation as you approach the cornua. In this way, the tube itself is never ligated, an important innovation in my opinion.

That it may be seen how far my conclusions are based upon clinical work, I will say that some one of the procedures suggested have been done by me upon a series of eighty cases; that most of these cases have been seen at periods varying from six months to two years: that all except seven have so far given excellent therapeutic results: that in cases where the tubes have been removed and the ovaries left in situ there has been for a time a tendency to menstrual headache, and, in some, epistaxis; otherwise, no untoward symptoms were noted.

Before resorting to the routine practice of curetting and packing the uterus in these cases, I met with instances of continuance of dysmenorrhœa and menorrhagia. Since employing the measure, however, these have ceased.

I now formulate the propositions of this paper in order that you may the more easily grasp the points for criticism.

1. As a rule, women are the better mentally and physically for the maintenance of menstruation and ovulation up to the period of nature's menopause.

2. The minor discomforts which pertain to the function even though they be clearly dependent upon the ovary and tube do not require removal of these organs.

3. The appendages may be operated upon to the promotion of child-bearing (four cases out of eighty).
4. Disease of the appendages does not always demand complete removal; certain conditions permitting partial removal.
5. The condition of the ovary should be the chief factor in determining the question of procedure.
6. If the ovary contains pus, it and the associated tube should be removed; it being the rule that whenever an ovary is removed the tube must accompany it.
7. If the tube contains pus, the ovary being free from pus or disseminated degeneration, the operator is at liberty to amputate the tube and leave the ovary; the same rule may apply in cases of hydrosalpinx and hæmatosalpinx.
8. Cysts of the ovary do not demand its removal, provided they are not general throughout the organ and can be enucleated—hæmatoma of the ovary being a possible exception.
9. Tubes with open infundibula, even though adherent and affected with parenchymatous inflammation and endo-salpingitis, do not demand removal except when one opens into a pus cavity.
10. A tube whose outer end is closed and yet otherwise is in good condition may be opened, cleansed, and its inner and outer coats coaptated, and then be returned to the abdominal cavity, provided it does not contain pus; possibly the same may apply to old blood.
11. Adhesions do not demand the removal of the tubes and ovaries, unless they be so dense that in breaking them the appendages are seriously injured. This presupposes that the appendages in themselves are not sufficiently diseased to demand removal.
12. In all cases of subacute or chronic tubal disease, it is of the first importance to treat the interior of the uterus. Curetting it with the sharp curette and then firmly packing it with gauze being the best method of treatment.

Appendix.

The following table of twenty-eight cases with illustrative histories, closes the presentation of the subject. (Fifty cases already reported in *The American Journal of Obstetrics*, Vol. XXIV., No. 9, 1891, page 1050).

NAME.	AGE.	SYMPTOMS.	DIAGNOSIS.	DATE OF OPERATION.
A. R.	28	Pain in left groin and suprapubic region. Frequent rush of blood to head. Menstruation scant.	Adherent uterus and appendages. Double cystic ovaritis.	June 1, 1891.
N. A.	21	Dysmenorrhœa. Pain in right and left groins.	Left ovary cystic and adherent. Right ovary adherent. Endometritis.	Nov. 9, 1891.
C. W.	29	Pain in left groin and suprapubic region. Dysmenorrhœa. Dysurea.	Left hydrosalpinx. Right pyosalpinx and cystic ovary. Adherent ovaries.	Dec. 28, 1891.
M. B.	21	Dysmenorrhœa. Abdominal pain both groins.	Adherent tubes and ovaries. Double hydrosalpinx.	Jan. 25, 1892.
T. C.	25	Dysmenorrhœa. Pain in left groin and lumbar region.	Adherent tubes and ovaries. Salpingitis. Left hæmatoma ovaries. Endometritis.	Nov. 30, 1891.
K. W.	31	Dysmenorrhœa. Paroxysmal pain right groin.	Adherent tubes and ovaries. Right pyosalpinx and ovaritis. Left salpingitis.	Feb. 15, 1892.
C. L.	19	Dysmenorrhœa. Sterile. Pain in left groin.	Right cystic ovary. Left normal.	Feb. 25, 1892.
E. U.	27	Pain in left groin.	Left pyosalpinx and cystic ovary.	April 21, 1892.
N. D.	32	Abdominal pain. Sterile. Menorrhagia.	Pelvic peritonitis. Right pyosalpinx. Left pyosalpinx and ovaritis.	May 2, 1892.
H. G.	30	Sterile. Pain in lumbar region. Severe headache.	Pelvic peritonitis. Double salpingitis. Hæmatoma left ovary. Retroversion uteri.	May 9, 1892.
L. S.	29	Pain in left groin and lumbar region. Dysmenorrhœa.	Cyst right ovary, size of an egg.	May 19, 1892.
L. V.	26	Pain in both groins. Profuse leucorrhœal discharge.	Retroversion uteri with adhesions. Double salpingitis. Right ovary cystic. Endometritis.	May 19, 1892.
M. C.	37	Lumbar pain. Headache. Excessive leucorrhœa.	Cyst right ovary.	Oct. 10, 1892.

TREATMENT.	DISCHARGED.	REMARKS.
Separation of adhesions. Enucleation of ovarian cysts. Hysterorrhaphy.	July 5, 1891.	Patient free from pain when discharged.
Enucleation cyst left ovary. Curetting and packing. Right ovary incised. Separation of adhesions.		Suppuration in both ovaries. Subsequently removed.
Removal right tube and ovary. Removal left tube. Separation of adhesions.	Feb. 8, 1892.	Good result. No tenderness. Menstruated once before leaving hospital.
Separation of adhesions. Removal both tubes.	M'ch 13, 1892.	Patient went out free from pain. Has considerable leucorrhœa.
Separation of adhesions. Enucleation hæmatoma left ovary. Amputation end left tube. Curetting and packing.	Dec. 23, 1891.	Patient went out in good physical condition. Very little pain and not constant.
Separation of adhesions. Removal right tube and ovary. Removal left tube.	M'ch 14, 1892.	At time of discharge has very little pain in region of bladder. Not nearly as much as before operation.
Puncture cyst right ovary and removal degenerated portion.	M'ch 20, 1892.	No pain at time of discharge or tenderness on vaginal examination.
Removal left tube and part of left ovary.	May 28, 1892.	Discharged cured.
Removal right tube and ovary. Removal left tube. Separation of adhesions.	July 10, 1892.	Patient seen several months after leaving the hospital. Free from pain and in excellent physical condition.
Separation of adhesions. Hysterorrhaphy. Amputation ends of both tubes. Enucleation hæmatoma left ovary.	June 18, 1892.	Failure from recurrence of adhesions.
Resection right ovary. Stitching right round ligament to abdominal wall.	June 18, 1892.	Nine months later patient free from pain. Good condition.
Separation of adhesions. Hysterorrhaphy. Amputation ends of both tubes. Enucleation cyst of right ovary. Curetting and packing.	June 25, 1892.	Patient left hospital in fair physical condition. Has occasional attacks of pain.
Removal right tube and ovary. Incision left ovary. Evacuation cysts.	Nov. 19, 1892.	April 3, 1893. Condition excellent. No ovarian enlargement. Working since January, 1893.

NAME.	AGE.	SYMPTOMS.	DIAGNOSIS.	DATE OF OPERATION.
M. McN.	23	Dysmenorrhœa. Pain in supra-pubic region.	Pelvic peritonitis. Right tube adherent. Left pyosalpinx and purulent ovaritis.	Nov. 21, 1892.
Br.		Sterile. Pelvic pain.	Left, small ovarian tumor. Right, hæmatoma ovary.	Dec. 10, 1892.
E. L.		Sterile. Irregular and infrequent menstruation.	Left, small ovarian tumor (Dermoid).	April 13, 1893.
W.		Dysmenorrhœa. Constant pelvic pain.	Chr. Salpingitis with adherent appendages.	March 10, 1893.
Bo.		Dysmenorrhœa. Constant pelvic pain.	Chr. Salpingitis with adhesions of appendages.	April 12, 1892.
C. S.	23	Dysmenorrhœa. Sterile. Pain in right groin and back.	Cystic ovaries. Adherent tubes and ovaries.	July 1, 1891.
C. F.	21	Dysmenorrhœa. Pain in right inguinal and suprapubic regions.	Cystic ovaries.	July 7, 1891.
D. F.	22	Dysmenorrhœa. Pain in both groins, especially right. Headache constant.	Cystic ovaries. Cyst left broad ligament. Retroversion uteri.	July 7, 1891.
M. S.	19	Dysmenorrhœa. Pain in both groins.	Cystic ovaries.	July 10, 1891.
A. Y.	28	Dysmenorrhœa. Abdominal pain. Excessive leucorrhœa.	Right ovary cystic. Adherent ovary and tubes.	Oct. 17, 1892.
N. H.		Dysmenorrhœa. Nervousness. Backache. Leucorrhœa.	Retroversion with adherent uterus and appendages.	April 15, 1893.
J. F.	36	Pain during menstruation. Pain in left iliac region. Headache.	Adherent tubes and ovaries.	Sept. 28, 1891.
A. N.	27	Dysmenorrhœa. Sterile. Pain in right iliac region.	Salpingitis with adherent tubes and ovaries.	April 11, 1892.
P. G.	23	Pain in right iliac, especially during menstruation.	Pelvic peritonitis. Adherent tubes and ovaries.	Sept. 26, 1892.
A. Y.	28	Dysmenorrhœa. Excessive leucorrhœa.	Retroversion uteri. Right tube adherent.	May 16, 1892.

TREATMENT.	DISCHARGED.	REMARKS.
Removal right tube. Removal left tube and ovary.	Dec. 15, 1892.	Patient went out feeling well. No pain.
Removal left tube and ovary. Exsection two-thirds of right ovary.	Jan. 10, 1893.	Pregnant since about January 30. Health excellent.
Removal left ovary. Incision right ovary and evacuation cysts.	May 10, 1893.	June 1, 1893. Result to date good.
Removal left appendages. Removal right tube.	May 1, 1893.	June 1, 1893. Result to date good.
Removal left appendages. Removal right tube.	April 1, 1892.	For eight months had fulness of head at menstruation. Flow scanty. Some pain. At date in most excellent condition at all times.
Separation of adhesions. Puncture cysts ovaries.	July 26, 1891.	March 3, 1892. Patient examined to-day. In excellent physical condition and is pregnant.
Puncture cysts ovaries.	Aug. 13, 1891.	Patient went out free from pain.
Puncture cysts ovary. Hysterorrhaphy. Removal cyst broad ligament.	Aug. 7, 1891.	When discharged patient was in good condition.
Puncture and evacuation cysts. Removal portion cystic ovary and sewed up.	Aug. 15, 1891.	Patient went out feeling better. Later came in with pain in right side and had nephorrhaphy on that side.
Separation of adhesions. Removal right ovary and tube.	Nov. 22, 1892.	April, 1893. Patient still has great deal of pain and is troubled with headache. Leucorrhœa still present.
Separation of adhesions. Hysterorrhaphy. Curetting and packing.	June 1, 1893.	In excellent condition.
Separation of adhesions.	Oct. 28, 1891.	Patient discharged free from pain and in good physical condition.
Separation of adhesions.	May 16, 1892.	Cured.
Separation of adhesions.	Oct. 28, 1892.	Patient discharged in excellent condition. Light pain on right side when examined vaginally.
Hysterorrhaphy. Curetting and packing. Separation of adhesions.	July 2, 1892.	Patient went out feeling very well. Operation failure, reformation adhesions.

Adhesions.—General to the Posterior Face of the uterus, the Broad Ligaments, Tubes and Ovaries. Uterus Retroverted. Small Cyst, in Left Ovary. Tubes Patent.

Case I. N. H., age eighteen, admitted to Bellevue Hospital February 7th, '93.

All the patient's functions are normal, with the exception of urination, which shows an increase in the amount of fluid passed in the twenty-four hours. Examination shows that it contains ten-per-cent. albumin but no casts or renal epithelium. She says that her health was always good up to five months ago, when she was confined after a very tedious and difficult labor. She was lacerated throughout the vagina. Her recovery was slow, being complicated by an attack of puerperal fever in which the patient evidently had pelvic peritonitis. Since this time she has never been well, suffering from nervousness, weakness, backache, leucorrhœa, dysmenorrhœa, and inability to control her bowels, owing to the laceration of the sphincter ani.

Physical examination shows the uterus retroverted and adherent. The left ovary appears to be somewhat enlarged.

On the 15th of April her abdomen was opened, and the patient was placed in the Trendelenburg position. The surface appearance of the uterus and surroundings was similar to that of the adjacent organs. The uterus was adherent to the floor of the pelvis and to the rectum. The posterior face of the broad ligaments was adherent to the floor of the pelvis. The Fallopian tubes and ovaries lay beneath the broad ligaments. All of these structures—uterus, broad ligaments, ovaries and tubes were covered with a net-work of organized adhesions which bound these structures in the positions mentioned.

Everything was freed from imprisonment by the free use of the scissors. The tubes when loosened up were found to be patent, the fimbriated extremities being in very good condition. The left ovary was found to contain a small cyst which was enucleated, the edges of the covering being turned in with catgut suture. The uterus was then attached to the anterior abdominal wall. The discharge from the cervical canal, and the size of the uterus showed that endometritis existed. The organ was therefore dilated, its interior scraped with a sharp curette, and then packed firmly with iodoform-gauze.

The patient made an excellent recovery, not only from the operation but from the distressing symptoms which had brought her to the

Institution. The albumin gradually disappeared from the urine with the improvement of her general health. [She was discharged from the Hospital June 1st, as cured of her pelvic ailments.]

Operation upon the perineum was postponed to a later date because of the possible injury to her kidneys of a second anæstheization.

Physical examination at the time of the patient's departure from the Hospital, May 31st, '93, showed that the uterus was in proper position and the surroundings of the organ were entirely free from any evidence of diseased structure, so that, in this case, both the therapeutical and anatomical results were satisfactory.

Sterility. Hæmatoma of both Ovaries—Amputation of Left—Resection of Right. Pregnancy.

Case II. In November 18, '92, Mrs. B. consulted me upon the question of sterility.

Examination showed that there was a tumor about the size of the uterus to the left of that organ and another about half that size to the right. Menstruation had been regular and comparatively painless. The patient's general health was good, although at one time the question had arisen as to the possibility of renal disease being present. Repeated examinations by her physician had failed to discover any such ailment, and a careful investigation on my part confirmed his observation.

While making a physical examination at my office, at which time I discovered the small tumors to right and left of the uterus, above mentioned, the one upon the patient's right suddenly broke down under pressure. The patient complained at the moment of a slight pain. A few moments later, however, the pain became so intense that she went into a state of partial collapse, and for half an hour her condition was somewhat alarming. It was evident that the tumor on her right side had been ruptured.

It was agreed that the operation should be done as speedily as possible for the purpose of freeing the uterus from the ill influence in question, as I inferred, in the absence of other causes, that the tumors were responsible for the sterility.

Operation was done December 10th. The left ovary was found to be one large hæmatoma about two inches in diameter. As it appeared to involve the entire organ, it, together with the tube of the same side, was cut away. Upon the right side, the ovary was found to be the

seat of a smaller hæmatoma whose sac was ruptured, a blood clot projecting from the rent. Around the seat of the ovary was some recent lymph. The rent was evidently that which had occurred at my first examination. Careful inspection of the ovary showed that the hæmatoma occupied about one-half of the organ. The remainder of the structure appeared to be sufficiently sound to warrant leaving it. I, therefore, removed the cyst and along with it enough ovarian tissue to comprise in all about two-thirds of the original structure, leaving about one-third of an ovary. The edges were brought together with Lembert sutures, deep sutures being passed to control the bleeding, catgut being employed in both instances. The tube being free from disease was not touched. The cavity of the abdomen was then cleansed with sterilized water and the wound closed.

The patient made a smooth recovery, and is now (June 5th) four and-one half months pregnant. It may be well to say that her health is excellent.

Hæmatoma of the Right Ovary with Double Hæmatosalpinx. Adhesions. Left Ovary Normal. Removal of Ovary and Tube on Right Side and Removal of Dilated Portion of Tube on Left Side—Left Ovary Allowed to Remain. Pregnancy. Delivery of Living Child Two Years After Operation.

CASE III.—A R., was admitted to Bellevue Hospital October 19th, 1890, æt. twenty-two. Married three years. Two pregnancies, both aborted at third month; the last was one year ago.

With the exception of sick headaches, health good until July last when she began to have a profuse and bad-smelling leucorrhœal discharge. This was soon followed by pelvic pain and backache. This pain has grown steadily worse, and is aggravated by effort and by coition. Menstruation moderately painful and profuse.

Present Symptoms. Pelvic pain; general nervousness, the patient being of a neurasthenic type.

Physical examination shows that the uterus is pushed forward and that it is fixed; behind and to the left of the organ there is a large and sensitive mass filling the whole left posterior half of the pelvis and encroaching upon Douglas' cul-de-sac. On the right side there is a smaller, sensitive mass. Both masses are continuous with the uterus.

Abdominal Section was done October 25th, 1890. The right ovary

was found to be the seat of an extensive hæmatoma ; both it and the corresponding tube were removed. On the left side the ovary was normal, but the tube was the seat of a hæmato-salpinx. The tube was cut off just inside the dilated portion, about an inch from the uterus, and its end attached close to the ovary. Adhesions were extensive on both sides. Drainage.

Six months after operation the patient's menstruation was normal. No pelvic pain, except after great exertion ; it soon ceases, however, and causes her but little annoyance. General health is much improved, although the headaches continue. Position of uterus normal, it is also normal in its size and in its mobility. No pelvic tenderness. Ovary on the left recognized, as the patient is thin, but it is of about normal size. Pelvis free from masses

November 1st, 1892 : On the 9th of October last, about two years after the operation above described, this patient was delivered of a healthy male child and at this date has made a complete recovery.

May 5th, '93 : The patient is in excellent health, with one exception : she complains that, whereas her menstruation prior to the operation, now two-and-a-half years ago, lasted for five and six days, and prior to the birth of the child, lasted three and four, it now lasts but two and three days. The menstrual epoch is accompanied with some fullness in the head, and the general impression made upon her is that the flow is insufficient in quantity to relieve the general plethora which seems to exist. She is stout, in fact, the picture of robust health, and, save for the one complaint above mentioned, well. The child is in equally good condition.¹

¹ The operation as made in this case is reported on p. 1055, vol. XXIV, No. 9, 1891, in American Journal of Obstetrics.

TWO CASES OF SUPRA-VAGINAL AMPUTATION OF THE
UTERUS BY BAER'S METHOD.¹

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I make no apology for appearing before this body with such a meagre list of cases, because I am certain that proofs, however slight, will be accepted by those who are seeking for the best method of treating the stump after hysterectomy, especially when the evidence offered is anatomical rather than physiological in character.

At the last meeting of this Society, I was very much impressed with the sound surgical principles underlying the new operation for supra-vaginal hysterectomy, which was then described by our fellow doctor, Baer. Last November I was able to satisfy myself of the feasibility of this operation. I was performing an operation for vaginal hysterectomy, when I found it necessary, in order to completely remove all the diseased tissue, to partially clean out the right broad ligament, without putting any compression or restriction upon it. I found that after I had freed the uterus on the left or sound side and delivered the fundus, that by ligating the ovarian artery in the summit of the broad ligament, and placing an artery forceps on the uterine artery in the base of the broad ligament, I could then easily remove the mass of carcinomatous infiltration without any subsequent hemorrhage. Since that time, I have twice been called upon to perform abdominal hysterectomy. In both of these cases I used the method as described by Dr. Baer, with the greatest satisfaction. With the patient in Trendelenburg's position, I did not find it a difficult operation to perform. Although I had never seen this method used, I was able to complete my first operation in less than forty-five minutes. The convalescence and rapid recovery of both these patients, as the appended history will show, was as uneventful and as uninterrupted as after a normal ovariectomy.

The method of performing this operation as described by Dr. Baer consists in separate ligation of the two ovarian and the two uterine arteries; separation of anterior and posterior peritoneal flaps, which are united over the stumps of the cervix, after the amputation of the uterine body. As the entire blood supply to the uterus is controlled,

¹ Read before the American Gynecological Society, May 16, 1893.

no ligature of the cervix is necessary, and consequently there is no subsequent suppuration of the stump.

In the absence of constriction of the cervix lies the difference between this and the Dudley-Goffe operation. Dr. Joseph Price confounds them in his article published in the *American Journal of Obstetrics*, November, 1892. Here he speaks of this operation as the one "of stitching the peritoneum across from side to side, leaving the cervix open in order to allow the escape of pus and ligatures in a few days. Of this operation it is only fair to say, that the results have been apparently good; but that it is good surgery or more ideal than the use of the clamp, to do an operation with the expectation of pus to escape from the vagina, is not at all to my understanding." Dr. Price goes on to say that this is the same operation proposed four years ago by Dr. Dudley in New York. Dr. Baer answered this same criticism, when closing the discussion on his paper last September in Brooklyn, saying that these two operations are different in both principle and practice, having the all-important distinction that no constricting ligature is applied round the cervix; consequently there is no sloughing of the stump and suppuration.

Dr. Baer's first operation was performed on October 2, 1891, but Mr. Frederick Treves of London had evidently described and performed the same operation some little time before. Mr. Treves makes a very strong plea for this operation in his *Manual of Operative Surgery*, published in London in 1891; later by Lea Bros. of Philadelphia, in 1892. He speaks of his operation as "a method of performing Schroeder's operation," which consists in separate ligation of the four arteries, the two ovarian and the two uterine; the latter he secures after opening the broad ligament, separating them from the surrounding tissues and applying an immediate ligature of catgut. He then amputates the body of the cervix, using no constricting ligature of the stump. As he says, "if the vessels have been properly secured the face of the stump is pale, and the oozing from it is quite inconsiderable, not comparable to such as may take place from a surface from which thick adhesions have been stripped." He closes the cervical canal with two catgut sutures and brings together the divided edges of the broad ligament with a continuous catgut suture.

As will be observed, Mr. Treves' operation differs from Dr. Baer's in closing the cervical canal and the sutures in the peritoneal edges of the broad ligament and in the manner of applying the ligatures which control the four arteries; but the principle underlying the

two operations is the same. Mr. Treves had evidently described this operation some time before his book was published, for in his book he says: "This method of Schroeder's has been vilified with an illogical and vulgar coarseness, which has obtained for some writers on abdominal surgery a distinctive position in the literature of the times." The operation may no doubt be said, as one writer says, (Milton, in the *Lancet*, November 29th, 1890), to have been 'universally condemned,' and it is to be regretted that a judicial criticism has been replaced by such virulent and personal abuse."

It is evident, as I say, that Mr. Treves had described his method of operating before the publication of his book, because Mr. H. M. N. Milton, of Cairo, Egypt, reports in the London *Lancet*, November 29th, 1890, three supra-vaginal hysterectomies performed, as he says, by Mr. Treves' method. Milton's first case was operated upon in the Cairo Hospital on January 20th, 1890, one year and nine months before Dr. Baer performed his first operation. Reference to all the authorities which I have at hand, including the files of the *Lancet* and the *Index Medicus*, has not enabled me to find Mr. Treves's earliest description of his operation. He has, however, operated upon several cases before the publication of his book, for he says: "the operation as above described I have carried out in its entirety and without difficulty. The cases were, however, simple and uncomplicated; in one instance the tumor was very large, weighing twenty-one and one-half pounds, but the size did not add to the difficulties. The patients recovered as perfectly as after an ovariectomy."

Dr. Milton's three cases made an uninterrupted recovery, and in conclusion, when comparing this operation with the extra-peritoneal operation of treating the stump, he says: "It seems to me that whenever the uterus can be sufficiently isolated to allow of the *serre-naud* being tightened around its cervix, it will be clearly possible to pick up the uterine vessels and raise the peritoneal flaps."

We have then up to date at least:

Two cases by Mr. Treves; no deaths.

Three cases by Mr. Milton; no deaths.

Seventeen cases by Dr. Baer; one death from the effects of ether on a patient suffering with a large goitre.

Two cases by the author; no deaths.

Total of twenty-four cases, with one death, or four per cent. of mortality.

No death due to the operation itself.

A truly remarkable showing for any new operation of such magnitude, and especially so when compared with the older statistics of abdominal hysterectomy.

My first case, Mrs. W. of St. Paul, sent to me by Dr. Jeanette McLaren of this city. Mrs. W. is a clerk, but the abdominal tumor from which she has been suffering for the past three years gives her so much distress that she fears she cannot continue in her present position and is therefore very anxious for relief. Mrs. W. is thirty years old; no children; no miscarriages. For the past three months she has been very faithfully treated by her physician with intra uterine galvanism, sittings of from five to ten minutes at least twice a week, using from fifty to one hundred millimetres of current. She has been benefited as far as hemorrhage is concerned, but as the tumor continues to increase in size and the pressure symptoms are more severe she asks for an operation. The operation was performed at St. Luke's Hospital in St. Paul, February 14th, 1893, the uterus being removed by Baer's method: Ligation of the four arteries, amputation of the uterus at the internal os, no ligation of the cervix. The uterus with both tubes and ovaries attached I showed to the Ramsey County Pathological Society at its April meeting. The uterus contained a single interstitial soft fibroma, as large as the uterus at the sixth month of uterine gestation. The patient made an uninterrupted recovery, temperature never raising above 100.5° . Suffered no pain; had no inflammation in the pelvis; no discharge from the cervix. Patient left the Hospital on the twenty-first day after the operation.

My second case, Mrs. H., Norway, Michigan. Aged fifty; mother of several children. Sent to me by Dr. Henry Day of Eau Claire. Although she had passed the menopause, the tumor had been rapidly enlarging during the last year. She was suffering from very distressing pressure symptoms, interference with the bladder and rectum, so much pelvic pain that she was not able to get about with any comfort. The operation was performed at St. Joseph's Hospital, St. Paul, March 11th, 1893, before a large number of visiting physicians and the senior class from the State University. The tumor was found to be a large sub-peritoneal fibroid, which had dissected down into the cellular tissue of the right broad ligament. The tumor was somewhat larger than the adult head; the uterus had been pushed to the left, and raised so high in the pelvis that the cervix could just be touched with the examining finger in the vagina. It was necessary to enucleate the tumor out of its capsule before the uterine artery on the left side could be reached

and ligated. This case, it seemed to me, tested the ability of this operation as much as most operations of this class could. The operation was completed by bringing the edges of the sac, which had been trimmed, together with a continuous catgut suture and the abdomen closed without drainage. The patient made an uninterrupted recovery. She suffered almost no pain; her temperature hardly rose above 101° ; pulse never rose above 100. She had no pelvic inflammation, no discharge from the cervix. She left the Hospital and returned to her home on the twenty-eighth day.

I am sure that this operation will recommend itself to the profession, both on account of its simplicity as well as for its sound surgical foundation-principles. It does not distort the pelvic viscera; it allows the union by first intention of both the pelvic and abdominal incisions. It can be more quickly performed than a complete removal of the uterus, and more quickly also, I believe, than Byford's operation of fixation of the stump. It does not shorten the vagina as both of these last operations must, and as the vagina is not opened there is less danger of infecting the peritoneal cavity.

In conclusion I would say: all honor to Dr. Baer and to Mr. Treves, the men who by their surgical wisdom have been able to present to us this ideal method, who have been able apparently to solve this vexed question, i. e., the best way of dealing with the stump after supra-vaginal amputation of the uterus.

INFLUENZA AS AN EXCITING CAUSE OF ABORTION AND PREMATURE DELIVERY.

BY J. HENRY FRUITNIGHT, M. D.

New York.

During the prevalence of influenza recently, I was impressed by the frequency with which premature delivery took place when a pregnant woman happened to be the victim of an attack of the malady. Professional friends to whom I mentioned this, reported similar experiences. It seems to me, therefore, that it is not mere accident nor coincidence that can explain the occurrence of abortion or premature delivery in

these cases. I deem it of importance then to put these cases on record.

CASE I. Mrs. I. K., aged thirty years, passed through a typical attack of influenza. She was pregnant three (3) months. Has borne six children and has had several miscarriages. As regards her pregnancy she did not suffer from any untoward symptoms. Just as the symptoms of la grippe had abated, pains of labor set in and, in my absence after a period of eight hours, she was delivered by my associate Dr. Geo. Bieser of a foetus and placenta of the third month. She made an uneventful recovery.

CASE II. Mrs. K., aged thirty-two years, mother of one child. Pregnant about third month. Had had a very severe attack of influenza lasting about two weeks. Just as she was recovering from the attack she was suddenly seized one evening with a profuse hemorrhage accompanied by severe pains. A foetus of the age indicated was expelled. It was necessary to dilate and deliver the placenta artificially with subsequent curettement. Aside from extreme weakness nothing of importance was to be noted during her convalescence.

CASE III. Mrs. R., aged twenty-six years, the mother of two children was pregnant about two and-one-half months. She had an aggravated and prolonged attack of influenza. As the attack was about over, she complained of a slight show of blood from the vagina. Appropriate remedies were prescribed with a view to prevent a miscarriage. The discharge ceased somewhat, but three days later it came on more profusely accompanied by severe labor pains. In my absence my associate Dr. Geo. Bieser attended her and delivered her, requiring curettement to get rid of all placental tissue. From the loss of blood the patient was very weak and made a tardy recovery.

CASE IV. Mrs. H., aged thirty-one years, the mother of three children, pregnant four months. She passed through an ordinarily severe attack of influenza. She had about convalesced when she was suddenly taken with uterine hemorrhage and labor pains. In a very short time she was delivered of a foetus of the age stated followed by the placenta *en masse*. Her recovery was speedy with nothing of moment to mark it.

CASE V. Mrs. K., aged thirty-six years, the mother of three children, pregnant about eight months. Was afflicted with quite a severe attack of influenza. Within a few days after her recovery she was suddenly

seized with labor pains and oozing of watery discharges. Next day, in my absence after a difficult instrumental labor, she was delivered of a living child of the development of about eight to eight and-one-half months by my associate Dr. A. E. Bieser. During her accouchement she was very ill, having at one time a temperature of 104° and giving evidences of a pelvic cellulitis. She, however, in time recovered and is now well.

It is hardly necessary to state that all of these cases were treated on antiseptic principles after delivery.

* As already intimated, it may be contended that this sequence of premature delivery to influenza should be regarded as a coincidence, or at least an example of the fallacy of "*post hoc ergo propter hoc*." I cannot be induced to believe this, for to me it seems much more plausible that just as in typhoid fever, scarlet fever, small pox, and the other infectious diseases, the specific *materies morbi* is the exciting cause of the premature delivery, so also in cases of influenza, *its* special morbid entity must be the exciting cause of the premature delivery.

161 West Fifty-seventh Street.

METHOD OF OPERATING FOR LARGE OVARIAN CYSTS, WITH REPORT OF A CASE.¹

BY RALPH WALDO, M. D.,
New York.

The woman from whom the cyst that is presented to you this evening, was removed, is thirty-four years old, single, has a normal menstrual history, has had several attacks of intermittent fever; otherwise her health has been good until within the past six years, during which she has noticed a gradual increase in the size of her abdomen, which several physicians told her was due to dropsy. During the past year she has lost a good deal of flesh, her general health has been very much impaired and she has had frequent attacks of indigestion accompanied by vomiting.

March 27th she was admitted to Lebanon Hospital and a diagnosis of cyst of the right ovary was made. She weighed one hundred and thirty pounds, was markedly emaciated, the circumference at the

¹Read before The New York Obstetrical Society, May 16th, 1893.

umbilicus was forty-six inches. The urine was normal in quantity and quality.

On April 5th the abdominal cavity was opened and a large multilocular cyst, of the right ovary, weighing fifty-six pounds, was removed. It was necessary to tap several of the cysts. In some of them the fluid was dark brown and in others it was clear and transparent. A large semi-solid mass was found which on further examination proved to be composed of a number of small cysts, firmly held together by a thick wall. The pedicle was broad and vascular. It was tied with three silk ligatures. At one point there was a firm and vascular adhesion to the omentum that required a double silk ligature to include it, otherwise there were no adhesions. The abdominal wound was closed by interrupted silkworm-gut sutures. The abdominal wall was left in a very loose, folded condition.

During the operation, after the patient was thoroughly under the influence of the anæsthetic, a very small amount of ether was given. As soon as the tumor was removed, the house surgeon, Dr. Roth, compressed the abdominal aorta until the dressings and a tight bandage were applied. The pulse remained good, but the respirations became very slow and there was marked cyanosis. This condition lasted for two or three hours. After the operation the foot of the bed was raised, a stimulating and nutrient enema was given, mustard was freely applied to the chest, and the face and neck were thoroughly rubbed with a towel wet in ice water.

On the second day the rectal temperature reached 102.4° F. A simple soap and water enema was given and a large movement from the bowels resulted. After this with one or two exceptions the temperature did not reach 100°, and then it was easily reduced with quinine, and as there was a history of malarial fever we felt justified in considering the temperature at least in part due to material causes. For the first seventy hours, nutrient enemata were given. No food was given by the stomach until after the expiration of forty-eight hours.

On the seventh day the stitches were removed and primary union was found to have taken place. There was a dermatitis over the abdomen that was probably due to the antiseptics. The wound was at the bottom of a depression so that everything gravitated into it and as a result a superficial ulceration along about half of its length was produced. This healed under appropriate treatment.

After the first dressing the circumference of the abdomen at the umbilicus was twenty inches, which was twenty-six inches smaller than

before the growth was removed. At the present time the patient is able to walk and will leave the hospital in a few days.

In presenting this case to you I do not propose to advocate any new and particular method of operating, but to call special attention to a few points that I believe will insure the greatest percentage of recoveries after the removal of ovarian cysts that cause marked distention of the abdomen.

The tumor should not be tapped a few days before its removal is attempted, for the purpose of gradually removing the intra-abdominal pressure, as it is never possible to determine the exact character of the cyst or its contents and very probably more or less of the contents will escape into the abdominal cavity. Furthermore, after tapping, the cyst will very rapidly refill and so weaken the patient, to say nothing of the possibility of infecting the growth or peritoneal cavity even where the best precautions are taken.

The patient is prepared for her laparotomy in the ordinary way. As all of these cases are in a weak condition, everything is done to conserve their vitality. Twenty minutes before the anæsthetic is administered, one-sixth of a grain of morphine is given hyperdermically, as less of the anæsthetic is required and the shock is not so severe either during or after the operation. After the cyst is tapped very little anæsthetic will be required because there is apt to be quite marked anæmia of the brain and at the same time a decided diminution in the number of respirations and not infrequently they become shallow, so that the blood contains a large amount of carbonic acid gas which in itself is an anæsthetic. As soon as the cyst is delivered through the abdominal wound, an assistant should compress the abdominal aorta and so cause as much blood as possible to flow through the vessels of the upper part of the body and head, as well as to diminish the area supplied and keep up the intra-cardiac pressure and so prevent death from heart failure or from what I believe is more apt to occur, failure of the respirations. The abdominal wound is closed and the dressings that come in contact with the wound are applied in the ordinary way. Then there is a thick layer of cotton, (many times six or eight inches), applied all over the abdomen and a very tight bandage put on and the patient put to bed. Not infrequently it will be found necessary to elevate the foot of the bed and violently rub the face and chest with a towel wet in cold water. The respirations will give more anxiety than the heart. Within two hours after the operation a nutrient enema of beef juice and peptonized milk is given and if the

heart's action is not good half an ounce of whiskey is added and unless there is some special contra-indication they are given every four hours for two days. As a rule during the second day five grains of quinine rubbed in the white of an egg is given in the enema every eight hours and if the rectum is irritable or the patient cannot tolerate the pain a small quantity of tincture of opium or better McMunn's elixir is given in the enemata. For the first thirty-six to forty-eight hours everything is kept out of the stomach, excepting when there is a great thirst small quantities of iced vichy at short intervals. At the end of this time peptonized milk is cautiously administered and if it is tolerated the quantity is increased. When this method of feeding is followed the stomach and intestine very seldom become distended with gas.

In these patients, who are very much exhausted by their disease and the operation for its cure I think it very inadvisable to give violent cathartics at any time and, as a rule, preferable to give no cathartic before the third day, and then a saline followed by a high enema of sweet oil.

Of course if complications arise they must be treated according to the indications.

72 West 45th Street.

REPORT OF A PORRO OPERATION FOR RUPTURED UTERUS.¹

BY L. G. BALDWIN, M. D.

Nothing need be said as to the history of the Porro operation or its legitimate application, for these are well known to all, so I shall content myself with simply giving the history of this case with the treatment and result.

Mrs. M., aged thirty-four years, seven months pregnant for the eighth time during a period of a little over eight years. Patient was first seen by Dr. A. W. Ford, of Brooklyn, on Monday, December 27, 1892. At that time she was having a slight "show" with but little pain and there was no dilatation of the cervix of any account and no diagnosis was made as to the probability of a premature birth.

The next afternoon the pain became *severe* and was accompanied by considerable hemorrhage. An examination revealed considerable

¹ Read before The New York Obstetrical Society, May 16, 1893.

dilatation and a diagnosis of placenta prævia was made by Dr. Ford. The vagina was tamponned with iodoform-gauze and the patient instructed to keep to her bed and to notify the doctor in case of any considerable flow. That evening the severe pain ceased or became diffuse and the hemorrhage stopped completely. The next day (Tuesday) the tampon was removed and dilatation was considered ample to remove the foetus and at 3.30 Dr. Ford sent for me to administer chloroform for him. I made a hurried examination of the heart and called attention to a mitral murmur (regurgitant) with a partial intermission every third or fourth beat. The placenta was easily perforated and removed, but on making a further effort to get hold of some portion of the child it was not to be found, but a more extended examination revealed a ruptured uterus, the child having escaped into the abdominal cavity with the exception of one foot, this was seized and by it the foetus was delivered without the slightest difficulty. The child weighed two and one-half pounds and lived for three days.

The delivery was followed by a prolapse of a portion of the small intestines and omentum nearly to the vulva, with almost no hemorrhage—not a pleasant condition of affairs to meet in a small dark room of a tenement-house. I at first thought that if I could get the intestines back into place and could pack the uterus with gauze, I would by so doing give the patient the best chance of recovery under the circumstances, but in this I completely failed as they displayed even more persistence in coming down than the ordinary prolapsed funis.

I at once decided that my only hope of saving the patient's life was to open the abdomen, and as St. Peter's Hospital was only a block distant it was thought best to remove her to better surroundings, especially as her general condition was fairly good.

Ether was substituted for chloroform and on opening the peritoneal cavity I was surprised to find it free from either fluid or clotted blood. A coil of intestines about eighteen inches long together with omentum was firmly held by the contracted uterus. The tear was found to extend from just above the external os on the right side even with and anterior to the fallopian tube, having only a band of peritoneum and mucous membrane intact below and extending further into the fundus on the uterine side of the wall than it did on the peritoneal surface. As soon as the plug of intestines and omentum were removed a free hemorrhage occurred which was readily controlled with an elastic ligature. Owing to the extent of the injury and the ragged condition of

the edge of the wound it was thought better to remove the uterus than to sew up the rent. This was done with but little loss of blood and the stump treated extra peritoneally, by carefully stitching the peritoneum around it, the vessels being tied with catgut. The resulting cavity was packed with ten-per-cent. iodoform-gauze. The abdominal walls contained fully three inches of fat. A gauze drain was inserted into the cervix through the vagina.

Hypodermic stimulation was necessary during most of the operation. She rallied nicely from the ether with but little evidence of shock. There was no nausea or vomiting, or any other outward symptom for seventy-two hours, when she commenced to be cyanosed. The heart resisted all efforts at stimulation and she died three hours later. A post-mortem examination of the abdomen showed five adhesions around the stump with no peritonitis and only a little bloody serum was found in Douglas' pouch. A complete autopsy could not be obtained.

In claiming this death as due to cardiac failure I realize fully the abuse the term "heart failure" has been subjected to, but in this case I think the facts bear out the conclusion and the death should not be charged to the operation.

The two points that most surprised me were first, the small amount of hemorrhage; second, the extent of the rent compared to the size of the child. I append the report of Dr. Henry Conkling, the pathologist of the hospital, on the uterine tissue, also a sphygmographic tracing of the pulse taken twenty-four hours after the operation, both of which are interesting as showing the predisposing cause of rupture. I was assisted in the operation by Drs. Ford, W. H. Skene, and Bostwick.

JANUARY, 1893.

The uterine tissue before being hardened was œdematous and lacked the normal elasticity of muscular tissue.

Under the microscope there was found a marked diminution in the number of the contractile-fibre cells. Some of these were undergoing degeneration as shown by a granular condition of their inner and outer margins. All of these preserved the normal spindle-shaped outline. Other cells were undergoing a fatty change. These were suffering also from the effects of pressure and were circular in shape. There were no changes in the areolar tissues.

The particular characteristic of unstriped muscular fibre is the contractile (or spindle-shaped) fibre cell. Changes in these either in number or shape always denote muscular weakness.



SPHYGMOGRAPHIC TRACING TAKEN TWENTY-FOUR HOURS AFTER OPERATION.

The above is a tracing of mitral regurgitation showing: 1. Irregularity in volume. 2. Irregularity in time.

There was at this time no complete intermission. There are seen slight curves in lower line denoting imperfect contraction instead of a sharp point. These curves have no relation to valvular disease proper, and are never present unless there be marked degeneration of some kind of the cardiac muscular walls.

TO CONTRIBUTORS AND SUBSCRIBERS.

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EDITORIAL.

A REFRESHING CHANGE.

We offer our readers this month practically a verbatim report of the discussion upon the various subjects presented at the recent meeting of The American Gynæcological Society.

It was taken down by our own stenographer sent to Philadelphia for that purpose.

It should come as a refreshing change from the usual method of publishing society reports—those *ex post facto* presentations made familiar to us in Cicero's published orations and in our own Congressional Record.

So close is this report that it is not difficult for one familiar with the individuality of any speaker to recognize his words by tricks of expression alone. This in itself lends it a peculiar interest especially for those who, separated by distance and other obstacles, and familiar only with the *halos* of many of our very distinguished gynæcologists, are naturally desirous of a more personal knowledge of these sons of Success. For such of our readers, our presentation of these Transactions will have a phonographic effect.

Personally, we are glad to notice a remarkable degree of excellence in these discussions as a whole—an unusual lucidity and directness of statement. There was far less, also, of evident effort at personal

advertisement to which, unfortunately, the debates of most medical societies are not strangers.

As for the scientific character of the meetings, the expressed opinions, founded on experience, of the many speakers—all this is more than interesting, it is most valuable, as was to be expected in a collection of the most famous specialists of a country which justly claims to have been the birth-place and cradle of modern gynæcology.

THE SWING OF THE PENDULUM.

It has been with peculiar interest that we have studied the trend of public opinion, especially in the matter of pelvic excisions, as shown in the several discussions at the last meeting of The American Gynæcological Society.

From its inception the JOURNAL has never ceased to cry out against the present operative craze and "to ring the changes" upon not "radical" but reckless surgery. It has again and again deprecated the *unnecessary* mutilation of should-be mothers of the coming generation. It has not hesitated even to say that the mass of gynæcologists everywhere, in their surgical exaltation, seemed like an excited crowd "rushing together, they know not whither." We have argued that no operation should be even tried, no matter how specious, unless the principles upon which it was founded first appealed clearly to the judgment of the intending operator; and, as an evident corollary, that no operation should be accepted and experimented with upon the strength of its proposer's name and reputation alone, no matter how exalted. Finally, we have protested, as the root of the evil, against surgeons and general practitioners interfering in matters gynæcological without thorough previous gynæcological training. All men will accept these as true principles in argument; it has been our unremitting endeavor, so far as our influence might reach, to have them accepted in practice, as well. Therefore, it is no small encouragement when such a man as Doctor Polk, who is noted for honesty, decisiveness of judgment, candor of statement and surgical activity—one too who has been called very "radical" (whatever the term may mean)—it is no small encouragement that he should enter a plea for the preservation of the uterine appendages and receive endorsement, on the essential point, from [so many distinguished members of the Society. This

paper appears first among the original articles of this month's issue and it contains a sermon well worth the hearkening to.

We have ourselves heard Dr. Polk scoff at the existence of true pelvic cellulitis ; we have also heard him with equal decision acknowledge his error and the existence of this disease, from his subsequent experience. Let us observe, in passing, with less of praise of Dr Polk than of general reflection upon human nature, that it is good to know a man honest enough not merely to change an opinion when he finds it wrong but honest enough also to take the trouble to state the fact. It is, in our opinion, the prevalence among gynæcologists of the very error into which Dr. Polk fell and which he has since modified, viz : that all extra-uterine pelvic inflammation is necessarily tubal, which was primarily responsible for the "operative craze" and altogether for that holocaust of victims to Sterility which all now deplore. It is very true that individual operators have for several years practiced Tait's operation, in this country and notably in Germany, with a discretion and a humanity not inculcated by its originator and we have quoted the work of these operators as a hopeful sign—but, as Dr. Polk wisely observed, *the subject* in spite of its want of novelty *had not received the attention it deserved*. In this he is eminently right, and we know of no man whose admonitions, on this subject, will carry as great weight and produce so excellent a result as will those of Dr. Polk.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, May 16, 1893.

GEORGE TUCKER HARRISON, M.D., President, in the chair.

Dr. S. MARX presented a set of

Intra-uterine Irrigating Tubes,

seven in number. They are manufactured by Ford, of New York. The tubes, copied after the Garrigues pattern, are made of very heavy thermometer glass. In size they range from thirteen, the smallest of the American scale of sounds, to twenty-three, the largest of the same scale. The smallest tube can be used in washing out a uterus, the seat of an early pregnancy, or in fact is small enough to irrigate a non-pregnant uterus after curetting. It is about the same size as an ordinary glass catheter.

Dr. WALDO asked if the tubes were so arranged that when water is thrown into them it would come out of all the openings at the same time. This was the objection to Garrigues' tubes. He had frequently used a small tube after dilating the non-pregnant uterus, but his experience had been that the fluid did not escape freely around even the smallest tube. On this account he did not like to employ them. This criticism was of course restricted to irrigation in the non-puerperal uterus.

Dr. H. L. COLLYER said that he had used two sizes of these tubes, the largest and smallest, and had found them sufficient for all purposes. He was accustomed to employ an ordinary glass tube with an opening at the upper end and one near this extremity. In irrigating the non-puerperal uterus, or after incomplete abortions, he found the smaller tube of great advantage, and if the cervix was sufficiently dilated, there was no trouble about the free escape of fluid. He had found the tubes useful in various operations, especially in curet- tage, where they may be said to be indispensable.

Dr. S. MARX also presented

A Blighted Ovum,

the third foetus of a triplet impregnation which was discharged per vaginam five or six weeks after a twin-labor (of about four months) in the form of a fleshy male.

History of the case is as follows: M., æt. thirty-eight. I am indebted to Dr. Loebinger for the specimen and history. Previous history good up to the time of labor. Patient had skipped four menstrual periods, when she began to have labor pains with considerable uterine flooding. In a short time a foetus was born, corresponding to about the fourth month of pregnancy. The entire placenta followed shortly after. She imagined herself well, except for some bleeding and an occasional painful uterine contraction. Exactly one week later she was again taken with severe uterine contractions and hemorrhage and in a short time expelled a second foetus which was macerated. Up again in a few days, she continued doing her work as housewife for six weeks. She felt well and except for the continuous bleeding would have been in perfect health. At this time, about one week ago, she was taken with a profuse and alarming flooding. Labor pains violent, lasting about five hours. The doctor being sent for found the uterus enlarged corresponding to the third month of pregnancy. Os fully dilated. She delivered herself of the third foetus, in the form of a fleshy male, without interference. She rapidly regained health and is to-day, when I saw her, in normal condition.

The product of conception was discharged as a solid mass of fleshy tissue, looking like a small myoma, about the size of a good-sized orange. After hardening in alcohol minus the *liquor amnii* its weight was two and three-quarter ounces. On incising the mass a small amount of amniotic fluid escaped from the sac-cavity in its interior. Wall of the sac smooth and lined by membrane. Chorion and amnion easily distinguished. But careful examination fails to reveal even the trace of a foetus. The greater portion of the foetal decidua has undergone fatty degeneration. The retention of a foetus, when blighted, for any length of time may be due to several factors:

I. Retention of a foetus in its own envelopes (when gemini), from a possible uterine atony.

II. Pregnancy in a uterus bicorpus. Each twin occupying, as it were, a separate uterus. Each half acting separately.

III. Twin pregnancy ; one twin in utero, the second one as an interstitial or tubal pregnancy. The second foetus gradually working from its abnormal implantation until it drops into the free uterine cavity and is there normally discharged.

DISCUSSION.

Dr. COLLYER said the specimen reminded him of one he had at home. It had been taken from a patient who, when he first saw her, was about to miscarry at the fifth month. There was an escape of fluid and some pain, and the uterus remained about the size of a three-months pregnancy. She went on to the eighth month and then expelled an ovum which had undergone molecular change.

The same patient had a similar experience in a subsequent pregnancy.

Dr. CRAGIN asked if what was described as an amniotic sac was really a *closed* sac when first examined, so that a portion of placenta folded upon itself could be excluded.

Dr. MARX replied that he was not present when the specimen was first examined, but the attending physician assured him that there was a distinct cavity, lined with mucous membrane and containing fluid.

A large Uterine Multilocular Fibroma.

Dr. J. E. JANVRIN presented a specimen of uterus with multiple fibromata removed by supra-pubic hysterectomy on May 5th, with the following history :

Mrs. M. W., æt. fifty years, married, and the mother of two children, applied at the Skin and Cancer Hospital, in November, 1888, for treatment having been told that she had cancer of the uterus. Had had frequent hemorrhages for four preceding years. Examination showed the uterine cavity much elongated, and a large mural fibroma occupying the whole left side and diffusing itself both anteriorly and posteriorly into the uterine cavity. Patient refused to submit to hysterectomy. Reported occasionally up to May 3d (this month) when she entered the hospital for the purpose of having hysterectomy performed. Tumor has grown a good deal during the four years and is now as large as the adult head.

Operation done on May 5th, the broad ligaments being tied off in sections and cut through and the entire mass (uterus and fibromata)

being removed. The cut surface of the upper end of vagina closed by continuous catgut sutures, and then the peritoneal flap, previously dissected from anterior and posterior surfaces of the tumor, brought together with continuous catgut sutures, so shutting out the peritoneal from the pelvic cavity.

The patient has made an excellent recovery. The abdominal cavity was flushed out with warm sterilized water prior to closing it up. No drainage was made use of, everything connected with the operation being perfectly clean. There was no indication for it. In this case the cervix had become obliterated by the infiltration of the growth and consequently there was nothing in the shape of cervical tissue remaining from which a stump could be formed. The specimen shows the uterine cavity spread out over the right side of the mass up to its apex; the tumor itself being made up of many fibromata. The weight of the mass after being thoroughly drained of blood and serum was ten pounds.

DISCUSSION.

Dr. H. N. VINEBERG asked if the hemorrhages had continued all the time.

Dr. JANVRIN replied that her menstruation had only been slightly irregular—she had really menstruated up to the time of operation.

Dr. WALDO said that it was generally supposed that these tumors either cease to grow or diminish in size after the menopause, yet it was doubtless within the experience of all those present that some cases do not follow this rule.

THE PRESIDENT remarked that this point was very interesting, because it largely determined the question of operating upon these cases.

Dr. JANVRIN said that it had been his experience that from the time menstruation absolutely ceases, fibromata as a rule remain stationary or else undergo moderate atrophy. He had watched these cases very closely in former years when it was customary not to operate upon them. There could be no question about the occurrence of such atrophy, yet he had seen several cases where there had been not only no atrophy but an actual increase in size after the complete cessation of all hemorrhages. One of these cases was that of a woman, now living, and at present about sixty years of age, whom he had known for the past twenty years. She had a very large fibroma and severe

hemorrhages. For at least five years after the cessation of menstruation, the mass increased slowly, but during the past eight years it had diminished, so that it was now not more than three-fourths of its former size. Such cases are, however, very exceptional.

With regard to the removal of the specimen presented, he said that on account of the obliteration of the cervix, there was nothing left from which to form a stump, as there had been in the specimen which he had presented at the last meeting. Of the two operations, as he said then, he thought that where one felt certain that the cervix was not diseased, and the tumors themselves were entirely above the internal os, the quicker and neater operation was to leave a cervical stump, first having ligated all the arteries in the broad ligaments and of course leaving the cervix free from any ligature.

Dr. BRETTAUER asked if the vagina in the case reported this evening was first sewed up with catgut and then the two peritoneal flaps.

Dr. JANVRIN replied that the rule is to close the two flaps of peritoneum and leave the vagina open, but in this particular case the operation was so clean he thought it safe to close the vaginal opening first and then the peritoneal cavity in the manner described.

Dr. BRETTAUER thought this method of operating 'likely to be followed by retention of secretion between the peritoneal flaps and the vaginal sutures. This secretion might be septic though not necessarily causing an elevation of temperature, and hence it did not seem to him an entirely safe method. He thought there would be less trouble if a strip of iodoform-gauze were left in, draining into the vagina. This could be removed in twenty-four or thirty-six hours, and certainly would not prolong the period of convalescence.

Dr. JANVRIN said that there had been no such complication in his case; had there been any such accumulation, it would have been simply necessary to open up the vagina, allow it to escape and wash it out. The very fact that in the cases where he had employed gauze in this way there had been no discharge had led him to think that it was well to close up the pelvic cavity as well as the peritoneal cavity. The two stumps of broad ligament which contain the ovarian arteries are frequently left in the peritoneal cavity and yet do not give trouble; hence, if the other stumps are equally clean, there should be no trouble from leaving them in the pelvic cavity. Of course, if for any reason he feared there might be a septic accumulation in the pelvic cavity, he would resort to the more common practice of using iodoform-gauze.

Dr. L. G. BALDWIN presented a

Report of a Porro Operation for Ruptured Uterus. (See page 673.)

DISCUSSION.

THE PRESIDENT remarked that the modern tendency in these cases is to return the stump to the abdominal cavity rather than to treat it extra-peritoneally.

Dr. MARX suggested that it might not be advisable in such a complicated case as this, where repeated examinations had been made in a tenement house, to sink the stump for fear of infection. He asked if the urine had been examined, or if there were any evidence that the rupture of the uterus might have been due to changes in its structure brought about by Bright's disease.

THE PRESIDENT thought there was much more danger of infection when the stump was treated extra-peritoneally than when it was dropped into the abdomen.

Dr. WALDO thought if the stump had been infected, the peritoneal cavity would have been infected from the rupture of the uterus. Personally, he would have favored the removal of the uterus and the introduction of a drain of iodoform-gauze through the vagina. In his opinion, the history indicated that death probably resulted from sepsis. The use of iodoform-gauze did not increase the seriousness of the operation, and if infection occurred it was important to have the iodoform-gauze drain.

Dr. COLLYER asked what was the probable cause of the rupture of the uterus; was it due to manipulation and extraction, or connected with dilatation of the os? He had known rupture of the uterus to be produced by the insertion of a rather large hand while the uterus was contracted. He could not see why after the rupture had occurred in the case reported, there was no hemorrhage; there is usually quite profuse hemorrhage, either into the abdominal cavity or externally. It had been his experience that in such cases one has very little time in which to do any operation with a view of saving the life of the patient. He was inclined to think that the patient's death here was due to heart-clot from the great loss of blood. He presumed the mitral regurgitation was the result of an old rheumatic affection—a disease which tends to weaken the patient markedly.

Dr. E. E. TULL asked for particulars regarding the attachment of the placenta and whether the rupture was at the placental site, so that

it might be explained on the ground that this situation of the placenta resulted in a thinning of the uterine wall. Incidentally he wished to say that it was risky to leave a case of placenta prævia after the diagnosis had been made, for in most cases delivery can be effected in a very short time. In the cases which he had seen, the os could in every instance be easily dilated.

Dr. BRETTAUER agreed with one of the speakers that death was probably due to sepsis and not to heart trouble. Cases of sepsis occurring, for instance, after much loss of blood run a very different course from the ordinary ones. The tracing of the pulse he thought spoke for itself. He recalled a case of extra-uterine pregnancy on which he operated in the New York Cancer Hospital, about two years ago; the patient had lost considerable blood before her admission to the hospital. The operation occupied only about forty-five minutes, and there was no evidence of shock some hours after the operation. On the evening of the next day the temperature was 100.4° , and the pulse, which before the operation was between 110 and 115, had risen to 125 or 130, and showed a tendency to become still more rapid. Even then the patient's general appearance impressed him favorably, yet on his morning visit he was told that the patient was dead. There had been no further rise of temperature and no enlargement of the abdomen. The autopsy showed not the slightest evidence of peritonitis. The pathologist reported that there was some parenchymatous nephritis, which in his opinion was due to ether. Personally, however, the speaker thought the woman died of sepsis.

Dr. MARX said that one year ago one of his private patients, a primipara, nearly died from an accidental hemorrhage. Owing to the emergency, delivery was not thoroughly aseptic. She developed septicæmia and was very sick for five days, yet not once was there the least rise of temperature, although the pulse kept steadily increasing in frequency. There could be no doubt about the existence of sepsis, for she had an embolic pneumonia, then a phlegmasia alba dolens, and finally died. Not even just before death was there any rise of temperature.

Dr. VINEBERG said that in these cases of sepsis unaccompanied by a rise of temperature, it is not necessary that there should have been great loss of blood. He looked upon the case reported as one in which death was due to sepsis.

Dr. J. L. MORRILL thought some of the worst cases of sepsis were those in which there was no marked elevation of temperature, but in which the pulse showed a tendency to steadily increase in frequency.

He had seen such cases, and the more extended his obstetrical experience the more attention did he pay to the pulse.

THE PRESIDENT said that it took a long time for us to find out that it was possible for septicæmia to occur without an elevation of temperature and also to learn the true significance of the frequent pulse. He could recall the look of sublime satisfaction on the face of the attending physician at the hospital when the temperature remained normal, even though the pulse was 140 or 150 and the patient steadily failing. Owing to so much importance being attached to the temperature, to the neglect of other important signs, the thermometer had actually been the means of doing a great deal of harm as well as good.

Not long ago he had been called by another physician to see a case of sepsis. The patient had been confined five days previously, and the physician was directing his attention almost entirely to overcoming the inactivity of the kidneys. The speaker called his attention to the fact that not only were the kidneys overwhelmed by the poison but also the brain, and that the condition was really one of acute sepsis.

Dr. BALDWIN, in closing the discussion, said that the chief reason for not treating the stump intra-peritoneally, was that he was anxious to finish the operation as soon as possible and thought the method adopted the quicker one. At the time of the operation, there was some albumen in the urine. He agreed entirely with those who had spoken that it was not at all necessary to have a high temperature to make a diagnosis of sepsis, but in view of the amount of stimulation required from the beginning, the length of time which elapsed without the occurrence of sweats, chills, nausea, vomiting, or increase of fever, he did not think the case one of sepsis. The kidneys were acting well, and the urine had a fair specific gravity, and all the organs were performing their functions satisfactorily with the exception of the heart. He stated that there had been very little loss of blood in his case. The placenta had a central attachment. He could not say why delivery was not immediately effected when the diagnosis of placenta prævia was first made, as he was not then in attendance upon the case, but there was probably some good reason.

Method of Operating for Large Ovarian Cysts, with Report of a Case.

By Dr. RALPH WALDO. (See page 670)

DISCUSSION.

Dr. CRAGIN said that the two points of most interest in the paper were, first, the retention of blood in the brain and heart, and second,

the maintenance of pressure on the abdomen after the wound had been closed. It did not seem to him necessary to make pressure on the abdominal aorta if the Trendelenberg position be employed, as gravity would take its place. A saline enema would ordinarily serve to quench thirst. Most operators would agree with what had been said about withholding food from the stomach for the first twenty-four hours and in regard to not moving the bowels until the third day. He agreed with the author as to the value of employing a heavy pad or dressing on the abdomen so as to make proper pressure.

Dr. JANVRIN heartily agreed with what had been said with regard to the Trendelenberg posture. Formerly many such ovarian cysts were met with but they are now comparatively rare. In the last case of this kind upon which he had operated, the tumor weighed thirty-five or forty pounds and was colloid. During the operation the heart action became so weak that he found it necessary to raise the buttocks by means of a chair placed on the table, and he was then enabled to continue the operation. This was seven or eight years ago and of course before we knew about the Trendelenberg position. This elevation of the pelvis renders pressure on the abdominal aorta unnecessary. All the points in the after-treatment were such as should meet with general approval of all present, as appropriate for all patients after severe operations.

Dr. VINEBERG said that the question of giving food after such operations had recently been discussed in the Society, and it was then the opinion of many that food was required and should be given in small quantities at regular intervals. This had been his own practice and it had proved satisfactory.

Dr. COLLYER said that in the few cases in which he had performed laparotomy he had endeavored to secure activity of the stomach and bowels with the idea of preventing nausea and the formation of adhesions. It was his custom to give a few small doses of calomel followed by a moderate dose of a saline cathartic. Peptonized milk or kumyss should be given in small quantities. When the etherization has not been prolonged there should not be troublesome nausea or vomiting. He agreed with the author that the temperature in his case was probably malarial.

Dr. WALDO, in closing the discussion, said that he had used the Trendelenberg position in many cases, but he thought it was more especially adapted to operations in the pelvis and not to cases where there was a very large cyst. In this particular case, one cyst pressed upward in the region of the stomach. Notwithstanding that he made a

long abdominal incision and tapped the cyst, there was still some difficulty in removing it. While the circulation in such cases might be benefited by the Trendelenberg posture, there were so many other contra-indications to its use, that the plan he adopted seemed more suitable. Compression of the abdominal aorta is especially serviceable in such a case to keep up the intra-cardiac pressure and also the nerve centres well supplied with blood which is furthermore assisted by the application of a thick abdominal pad held in place by means of a tight bandage.

He was sorry that no one had discussed the bearing of respiratory failure in these cases. The blood which supplies the respiratory centres under such circumstances is usually in bad condition—first, because the ether is ordinarily administered in hospitals by a young and inexperienced assistant, and hence too much of it is given; second, on removing the tumor the chest cavity is suddenly increased in size by the descent of the diaphragm, and there is very little power of expiration left, so the respirations become shallow and the blood is poorly supplied with oxygen.

RESOLUTIONS ON THE DEATH OF DOCTOR LEE.

NEW YORK, May 16th, 1893.

WHEREAS it has pleased an Almighty Providence in Its infinite wisdom to remove by death our beloved colleague, Dr. Charles Carroll Lee, L.L.D., while still in the vigor of his manhood and the height of his usefulness,

Resolved. That we, the Fellows of The New York Obstetrical Society, have met with an irreparable loss in the death of an associate whose brilliant mind and loftiness of character, devotion to the highest aim of his noble calling, and unswerving allegiance to the rugged path of duty, made him an ornament not only to this Society but to the medical profession at large.

Resolved. That by the death of Dr. Lee, this Society is deprived of one of its most able and devoted members; one, who by his earnest labors in its cause, his thoughtful and judicious advice in all matters of doubt, his cheerful and hearty interest in everything connected with its well-being, has accomplished a vast deal towards its development and present success.

Resolved. That, appreciating as we do how great a loss his death is to his friends and associates, our deepest sympathy, our tenderest feelings are excited for the bereaved family of Dr. Lee in this hour of such overwhelming grief.

Resolved. That these resolutions be entered upon the minutes of this Society, that a copy of them be sent to the family of our late beloved colleague, and that they be furnished for publication to the medical journals of this city.

THOS. ADDIS EMMET, M. D.
T. GAILLARD THOMAS, M. D.
HORACE TRACY HANKS, M. D.

New York, May 16th, 1793.

The foregoing preamble and resolutions after eulogistic remarks by several Fellows were unanimously adopted by the Society.

ARTHUR M. JACOBUS, M. D.,
Recording Secretary.

TRANSACTIONS OF THE AMERICAN GYNÆCOLOGICAL
SOCIETY.

Eighteenth Annual Meeting, Philadelphia, May 16, 17, and 18, 1893.

DR. THEOPHILUS PARVIN, President, in the chair.

Morning Session.

The President of the Society called the meeting to order and said:

I see that I have been put down for an address of welcome. My own impression is that such is a custom more honored in the breach than in the observance. Nevertheless, it is a pleasant duty to welcome guests, and to give them a kindly greeting. And consider the welcome said. Whether it shall be a well-come will depend on how the work of the Society goes on. Certainly you have from the local members of the Society cordial greeting, kindly wishes, and best efforts to make your stay in the city as pleasant as possible; and I trust that if, at the close of the meeting, you are asked the question that was put to Dr. Johnson after spending a social evening, when one of his friends said to him: "Dr. Johnson, you were highly gratified this evening"—that you will be able to make the same reply that he did—"No, not highly gratified, but I do not remember any evening that was freer from objections."

Abstract of a paper entitled:

CONGENITAL DILATATION OF THE URETHRA.

BY WILLIAM H. BAKER, M.D.

New York.

(This paper will be published in full in the next number of the JOURNAL.)

Dr. BAKER had met with a few cases of failure of development of the female urethra which were erroneously mistaken for a canal artificially dilated through the effort of copulation. To avoid unjust discredit a diagnosis should be carefully made, and this can only be done by keeping constantly in mind the process of development.

The malformation arises from an arrest in the developmental process between the fourth and sixth months of foetal life. At this

time, the sinus urogenitalis lagging behind in its growth, the vestibule is likely to be carried considerably back of its natural plane; the urethra itself is shortened from one-third to one-half thereby. Just at this stage, when the urethra is formed as a distinct part from the bladder, if the arrest occurs, we subsequently find, as in the case to be reported, that there is no well-marked sphincteric action at the vesical neck, and consequently nothing to impede the ready admission of either sound or finger. The size of the urethra in these cases is usually sufficient to admit the little finger readily, and oftentimes the forefinger can be inserted with but little difficulty. This greatly increased size of the canal would seem to be due to a failure of filling in of the surrounding parts, rather than to an increased growth of the urethra itself. This is the more noticeable, as we generally find in these cases a corresponding failure in development of the vaginal canal, which is apt to be small and short and somewhat wanting in its upward anterior curve.

Dr. BAKER states that he desires to correct an impression which he has sometimes heard expressed by members of the profession, that such cases of enlarged urethræ are necessarily caused by either some vile practice of the individual herself or else by continued attempts at intercourse. The history of an interesting case is here given.

Abstract of a paper entitled:

ABDOMINAL AND PELVIC FISTULA AFTER CŒLIOTOMY AND LAPAROTOMY; ITS PREVENTION AND TREATMENT.

BY PAUL F. MUNDÉ, M.D.,

New York.

The term "Mural Abscess," is applied to a condition where the diseased mass, during a cœliotomy, having been completely removed and no pus escaping to infect the wound, ligatures and pedicles safely dropped and the incision carefully closed, a discharge of pus takes place after several days, from some part of the wound, usually a stitch hole: such an abscess extends only to the entirely-closed peritoneum, and is easily healed by splitting open the covering of the track, packing it with gauze and if necessary stimulating it by the curette, balsam of Peru, etc. In certain other cases of cœliotomy the sinus or fistula is found to extend even to the bottom of Douglas' pouch. The abdominal cavity being shut off by adhesions, the sinus does not affect the

patient's recovery. The causes of the formation of such deep abdomino-pelvic fistulæ are various. In cases of pyo-salpinx, purulent ovary, etc., where the sac bursts during detachment, flooding the pelvic cavity with infectious material—no matter how carefully the cavity is washed some of it undoubtedly remains and becomes a focus for the formation of an abscess which burrows its way upwards between the fully agglutinated intestines discharging usually at the lower angle of the incision. Such an abscess might however burst into the abdominal cavity, bladder, rectum, or vagina. Fortunately dense adhesions usually protect the abdominal cavity. Drainage tubes favor the formation of abdominal fistulæ since they cause the production of a canal surrounded by adhesions, provoking by their mere presence sero-purulent discharge. The cutting through of imperishable sutures also tends to promote irritation and suppuration in the pelvis and a re-opening of a portion of the wound. Such a sinus closes soon after the withdrawal of the suture. Such sinuses following the removal of intra-peritoneal growths are usually single and in the median line. If deep enough a probe can be felt per vaginam, behind or beside the cervix. Cases have been reported where a sponge, a piece of sterilized gauze, or artery forceps left in the abdominal cavity were the cause of fistulæ. An abdomino-vaginal fistula is very apt to follow the removal of the uterus, by cœliotomy for fibroids, the stump of the cervix being attached to the lower angle of the wound. The remaining portion usually sloughs out and the fistulous communication with the vagina granulates and contracts, but seldom heals spontaneously, which constitutes a great objection to the so-called extra-peritoneal method. Abscesses originating in the abdominal or pelvic cavity pointing usually close to Poupart's ligament or into the iliac fossa are liable to remain after evacuation. Such abscesses may be intra-peritoneal (localized purulent peritonitis, pyosalpinx or pus-ovary) and separated from the peritoneal cavity by adhesions: or they may be intraligamentous-cellular, due to inflammation and suppuration of the connective tissue between the broad ligaments and the vagina, rectum, and bladder; such extra-peritoneal or true pelvic abscesses may attain great size and burrow their way downward to the perineum or upward into the iliac fossa, and even to the kidney, dissecting off the peritoneum in their route and finally undermining the abdominal muscles and pointing to one side of the lower abdominal wall. They usually reach the abdominal skin in the upper portion of the inguinal canal close to the anterior superior spinous process of the ilium. Intra-peritoneal abscesses are more likely to

point toward the median line, so that when incised the peritoneum is found still attached to the pelvic wall and iliac fossa. In these cases it is necessary to make a deeper incision to reach pus than in extra-peritoneal abscesses. If the abscess be on the right side it is often impossible to decide whether it is due to an appendicitis or a pyosalpinx until opened. Both intra- and extra-peritoneal abscesses may point in other directions than the lower lateral abdominal wall or the inguinal canal. Thus cases of intra-peritoneal abscesses have been known to open just below the umbilicus; and extra-peritoneal over both recto-ischiatic fossæ. By the avoiding of causes mentioned, that is, using all antiseptic precaution, removing all diseased and infected tissue, employing only absorbable animal sutures, the prevention of the fistulæ would seem to be a simple matter; but there are other factors which tend to produce and maintain them.

First and foremost is the firm unyielding character of the walls of the abscess, which contract but only to a certain point and then show an almost invincible tendency to the formation of soft and friable granulations which manifest no desire to fill up and unite by healthy cell-growth.

Secondly, the depth of the sinus. No matter how well a deep sinus is packed or drained, as secretions do not run up hill some discharge is always liable to be retained, and the canal is prevented from closing from the bottom upward.

Thirdly, their anatomical situations with regard to surrounding unyielding bony and muscular walls prevent the application of peripheral compression by which even old abscesses may be brought to a close.

Finally such patients are usually very much run down by the long preceding illness and in poor condition for the reparative process; the longer the sinus continues the more does the general health become depressed until disease of the liver, spleen, kidneys, or general marasmus terminates life. A recent fistula in a patient with fair general health will, under proper management, show a disposition to close; but an old sinus in an ænemic and worn-out subject will persist as long as the patient lasts.

Cases where through drainage from the abdominal wall to the vagina can be carried out, present, provided there is a tendency to healthy granulation, the best chances for recovery. Such cases sometimes are cured spontaneously. The first object in the treatment of an abdominal pelvic sinus is to ascertain and remove its cause. Careful

probing of the canal should be practiced, and in cases of *cœliotomy* where silk was used, if any kind of irregular substance is discovered, an attempt at its removal may be made with long slender forceps, but it must be remembered that this hard substance may be merely a cicatricial induration, and that force might do injury by tearing the wall of the sinus. Granulations which bleed easily are seldom indicative of healthy cell-growth. It is necessary in such cases to scrape away the granulations with a sharp curette, irrigate the canal with a 1:5000 bichloride solution and pack it lightly with sterilized gauze, the irrigation and packing being repeated daily. Balsam of Peru, tinct. of *Calendula* 1:4 of water may be used before each packing to stimulate healthy granulation. A stick of nitrate of silver or a silver probe heated to red heat passed to the bottom of the sinus are very serviceable in obstinate cases. The too long postponement of the first opening of the abscess, thereby allowing the pus to burrow deeply; the too long use of rubber drainage-tube, if such a one was used; and the too light packing of the sinus with gauze, thereby retarding granulations from the bottom, are also causes for the intractable character of these sinuses. If the methods above spoken of fail, then there are but two courses open to the surgeon, neither of which is sure or entirely safe. The first is to open through into the vagina, if a probe can be felt at its bottom, through the vaginal wall, and a rubber drainage-tube inserted. This tube should extend into the vagina and secured at the abdominal end by a safety-pin. Irrigate daily with Tiersch's solution until secretion ceases, then draw down the tube an inch so as to have the upper portion of the sinus empty with a view to its closing; the tube can be held in place from below by packing the vagina with iodoform-gauze changing it once or twice a week; from above by a short piece of catgut attached below to upper portion of tube, above to a safety-pin over abdomen. If the sinus is found to heal from above satisfactorily, every week or oftener the tube may be drawn down. In drawing the drainage-tube from the vagina into the fistula, there is some danger of the bladder rupturing as it is usually adherent in these cases to the wall of the fistula and very friable. When a sinus has several ramifications it is useless to try to close the one pointing towards the vagina and leave the others untreated, nor is it good surgery to open them into the rectum or bladder. The second course open to the surgeon is to enlarge the wound down to the bottom and treat it by irrigation and wet gauze packing. The proximity of the bladder, rectum, peritoneal cavity and large vessels constitute a danger which should be borne in mind.

any of which if ruptured into may necessitate a *cœliotomy*. If the enlargement of the sinus fails, we still have a true *cœliotomy*. A diseased tube, ovary or deep-seated pus, packed among the adhesions may be the source of the discharge. If the focus of suppuration can be found and safely removed, the chances of the sinus healing are very much bettered. The conclusions derived at from the study of the subject are these :

1st. The formation and persistence of abdomino-pelvic sinuses after *cœliotomy* should be prevented by all means at our disposal.

2d. Such sinuses cannot always be prevented, no matter how careful we are.

3d. A certain number of early, moderate cases heal under appropriate treatment, and even a few old cases may recover after operation.

4th. *Cœliotomy* is usually not necessary or beneficial in treating these sinuses unless it can be distinctly shown or suspected with good reason that the focus of pus can be reached only in that way.

5th. Through drainage into the vagina whenever practicable forms the best method of curing deep sinuses.

6th. In certain cases where all means have been tried and failed, the patient's general health very good and sinus gives but little inconvenience, it is best to "let well enough alone" as long as she can live comfortably with it.

DISCUSSION.

Dr. GOODELL: Experiences I have had tally with what Dr. Mundé has said. My own experience is that these fistulæ very rarely occur in strict ovariectomies—that they occur almost always in septic cases of oöphorectomy, where diseased tubes and ovaries are removed, where we have an unclean operation. I have had more in years gone by than recently. I do not think it is always due to the ligature, by any means. I think sometimes the fistula is due to leaving tissue which should be removed. I have only to commend the paper. His proposition of deep drainage is to me a novel one—that of gradually withdrawing the drainage-tube slowly down—and strikes me as being a very admirable method. I had a case which ended fatally a number of years ago, though not in my hands. It was a very difficult old case, in which the pus and a fistula were left, and a number of months after the operation I was called in to see the patient and made an opening in the vagina, passing the tube through. It was my intention to remove it after

awhile, but I lost sight of the case and was told afterwards she died. The death was attributed to the drainage-tube. In that case I remember that I had a great deal of hemorrhage in cutting down upon the point of the sound in the vagina, which I was able to arrest only with some difficulty. I have had these abscesses occur, taking the greatest precautions. This skin abscess will occur occasionally. My experience is that it occurs more generally where you use a drainage-tube, and especially in fat women, and there is tardy union in fat women, and as a result we are liable to find this condition. I have had it also resulting from a buried gut suture, but I think that in those cases the gut was not so thoroughly antiseptic as I am able to make it now. For many months I have not had any fistulæ of any account. I try to avoid the use of the drainage-tube on that account, and as I say I use absorbable catgut for ligating, especially in all unclean or septic operations.

Dr. NOBLE: My own experience is that which has been brought out by Dr. Goodell, namely, that these conditions following ordinary cœliotomies are due not so much to the ligature as to the fact that not all the diseased tissue has been removed. In my early work I had several sinuses in which that unquestionably was the cause—cases in which old adherent pus tubes were very difficult to remove and in which the diseased tubes extended clear up into the horns of the uterus, and where instead of cutting out the horn of the uterus and sewing it up I simply applied the ligature in the usual way, which meant that a certain amount of the diseased tube was left in. I had two such sinuses: one closed up spontaneously and the other is open yet. But since adopting the method of removing all diseased tissues, no matter how the hemorrhage had to be controlled, I have had no sinuses. I always use silk, and of the whole number of ligatures which have been put in there is simply this one which is now open, so far as I know. I do not believe that it makes much difference whether you use silk or catgut or any other material, provided all the diseased tissue is removed. With reference to the question of pus ever being outside of the uterine appendages in the pelvis, I have had some experience upon that point. I believe as strongly as any one that as a rule when we have pus in the pelvis it is either in the tubes or in the ovaries, or in the peritoneal cavity as the result of diseased tubes and ovaries. Unquestionably that is the rule almost without exception, if there is any exception in non-puerperal cases. But in puerperal cases I have seen five in which unquestionably the pus was in the broad ligaments and had nothing to do with tubes and ovaries. In four of these cases the abdo-

men was opened and the tubes and ovaries were examined and were practically healthy. Of course they were somewhat congested but they were not diseased. In those cases where the abdomen was opened an incision was made above Poupart's ligament and the patients made rapid recoveries. The fifth case I believe was a case of abscess. The abdomen was not opened and therefore one cannot say absolutely that the tubes were healthy; but in view of the fact that upon making an examination the broad ligaments were perfectly flaccid and soft, I think the evidence was very satisfactory. Those five cases are the only ones, however, that I have ever seen in which the pus was not connected with the uterine appendages.

Dr. ANDREW F. CURRIER, of New York: We may divide the cases into those which are post-operative and those which arise spontaneously. Dr. Mundé referred to a certain number of cases which are familiar to all of us, in which the abscess is connected with extensive inflammation in the cellular tissue, and those, it seems to me, as far as the question of treatment is concerned, are to be managed differently from those in which the condition arises after an abdominal section. Then again we may divide that class of cases into two: one of which is alluded to by Dr. Mundé as vaginal sinuses coming after the operation of hysterectomy and the other, by far the largest class and which cause by far the greater amount of trouble, those which come after the performance of an abdominal section pure and simple. I believe with the reader of the paper that there are cases in which, however careful the operator may have been, fistulæ will surely result; that is to say, they are inevitable. Then there is another class which is avoidable, and I think our attention should largely be limited to these. Among the first class of cases that I may speak of are those in which the fistula has been caused by the irritation of the ligature alone; that is to say, the ligature may have been perfectly aseptic and applied properly, and yet its size is alone sufficient to cause irritation and to get up an effusion, which leads on to a sinus. And yet I believe that by far the greater cause of these troubles is in the abuse of drainage, and I think we are coming to a time when more rational views are being adopted in regard to the use of this agency, which is indeed a very valuable one, but which is susceptible also of very great abuse. The use of the hard drainage-tube in particular, which is followed in so many of these cases by the formation of a fistula, is to be deprecated except in very rare instances. Dr. Mundé, I think, threw down the gauge that there were cases in which

the peritoneal cavity was not associated with fistulæ, but in a very large majority of cases, and in all cases which I have ever seen, the walls of the fistula have been formed by the intestine itself. I think we should remember that, particularly in connection with the treatment of these cases, because if we use the curette roughly the soft granular tissue which forms around the intestine is easily broken down and is very easily followed by injury of the intestine itself, which may prove very serious. And so I think that if the curette is used in these cases it should be used with very great circumspection. I believe that the use of astringent applications, whether mild or severe, whether more or less caustic, is apt to be followed by very little benefit. There are cases which we know heal spontaneously, and those are perhaps the ones which would be benefitted by the use of mere astringents; but as a rule it has proven true in my experience that these fistulæ are not simple, that they are complex, that they are sinuous, and that the application of an astringent does not reach all the parts. It reaches only the parts most superficial, and the intestines lapping on each other obstruct the passage of the solution, so that the lower part is unbenefitted. In regard to the treatment of through-drainage, I think it is a very valuable method. It has been referred to also by Dr. Goodell, and I should like to emphasize the caution which he expressed, namely, the possibility of injuring the parts by going through the vagina. I have had experiences of that kind myself, and it seemed to me from the excessive hemorrhage which followed the operation that there must have been an injury to the iliac vein, and the operation which would seem theoretically so simple I have found, in fact, very difficult.

I think that the true way of treating these sinuses which are complex is the radical one, and I think that is the method which is to come into play. It seems to me that the rational way to treat these cases is to make an incision from the point of the abdominal wall which was opposite the lowest part of the fistula when reached by the probe, and, making an incision outwardly and dissecting downward, remove all the tissues as we go along. I have used the sharp curette very gently to obtain asepsis of the cavity. In one case, after I had passed the curette along and withdrew it, I withdrew with it a bristle of a scrubbing-brush which had evidently been used in the abdominal wall. I then curetted carefully again and withdrew with the curette a very large ligature, a No. 6 English silk ligature, which had included a very large portion of tissue, and which had evidently been the focus of irritation during the period of trouble. As this seemed to be the

focus of irritation, I thought I would defer any further operation for the time being and placed the patient in bed; in about two weeks the wound entirely healed.

Dr. A. PALMER DUDLEY, of New York: Dr. Mundé says that the probability is that these fistulæ follow most frequently in the wake of pus in the pelvis. It is my belief that fistulæ follow one of three conditions: either the existence of pus in the pelvis, which is not entirely removed at the time, or the use of a drainage tube, or the impregnation of the ligature, when used, by some of the pus in the tube. I believe with the gentlemen who have discussed the paper that we are very liable to get fistulæ when the pus not only involves the tube but the uterine portion of it running into the uterus. Therefore I have refrained from using a silk or any but a gut ligature. I believe also that we sometimes leave tissue that is thoroughly septic beyond the tube. Some gentlemen cauterize it and some use pure carbolic acid, and from the fact that they have such a condition introduce a drainage-tube, which assists in the formation of a fistula. In trying to do away with the dangers of sepsis they increase them by the use of the drainage-tube. I have seen five or six cases of fecal fistula (abdominal) resulting from such treatment, and for that reason I do not hesitate to say that I disagree with Dr. Mundé in his advice respecting a second abdominal section. In all the cases I have had I have either found a pus-pocket in the horn of the uterus or I have found a ligature, and in these cases the fecal fistula is simply due to nature's effort to relieve the condition through the intestine, and I have seen as many as four fistulæ in the intestines after an abdominal section, in which the ligature was the cause of it all. I not long ago removed a salmon-gut suture that had caused a discharge for eighteen months. To prevent that accident my practice has been not to use the drainage-tube through the abdomen. In the last two or three years I have invariably drained through the vagina, washing the patient thoroughly and packing the gauze beyond the uterus, re-opening again through Douglas' pouch and bringing the drainage through the sac; nor have I ever seen a bad result from it. I believe this to be the correct method of drainage in cases such as the Doctor has suggested. With respect to fistulæ formed about the bladder, in the cellular tissue, I agree with Dr. Mundé in his idea of pelvic abscess. I saw a number in California, perfectly independent of any intra-abdominal condition.

Dr. GEORGE M. EDEBOHLS, of New York: I wish to call atten-

tion to a condition not yet mentioned in this discussion, which is responsible for a good many of our intestinal fistulæ following cœliotomy. I refer to tuberculosis of the peritoneum. About a year ago I reported to The New York Obstetrical Society my entire experience with these cases of fistulæ that occurred after cœliotomy in my own practice. There were four of them at that time and of these two were due to tuberculosis. In one of them the cœliotomy was done for tuberculosis of the peritoneum and tubes and was followed by a fecal fistula, which remained in my hands for three or four months and was finally cured by Dr. Gill Wylie and his house-surgeon by establishing vaginal through-drainage.

Dr. CLEVELAND, of New York: In regard to the cause of sinuses after cœliotomy or laparotomy. I myself have never had a permanent sinus which was not due to the presence of some foreign material in the sinus itself—I mean by that the presence of a suture whether it was infected at the time of the operation, resulting in an abscess, or whether it was infected later. I have had one or two cases where I have felt that from imperfect asepsis the wound itself and the ligature had been re-infected. For the treatment of those permanent fistulæ I believe the through-drainage is the only method. But I wish, principally, to speak of one method of treatment which I have adopted in all sinuses of the abdomen—and that is the use of peroxide of hydrogen. I use it in various strengths and have never had a sinus fail to heal where I had used a catgut suture, nor where the sinus was due to the presence of a drainage-tube, nor where it was produced by the presence of gauze. I regard this as an important feature of treatment.

Dr. MUNDÉ: I think that Dr. Noble has really stuck the key-note and in his remarks has given us the most prominent cause for the formation and persistence of these sinuses, namely, that something has been left behind. But I would like to ask the Doctor how he is going to prevent it. It seems to me that the only wonder is that we do not have sinuses oftener. Dr. Dudley says he always drains through into the vagina and closes above. I have used this method of draining for this condition but once, and that was where a pus-tube in a case of pyosalpinx had ruptured through into the peritoneal cavity. While I was removing it, moving the hand straight down, my other hand in the vagina, I felt that I had nothing but the vaginal walls between my fingers. The pus tube had ruptured through into the pelvic cellular tissue. I had no other way to drain, so I drained

through into the vagina and closed the abdominal wound above. The patient recovered. I have used peroxide of hydrogen and think very highly of it. But when there is no pus or septic material I do not think it is any better than anything else.

Abstract of a paper entitled:

A SUPPLEMENTARY PAPER UPON VAGINAL HYSTERECTOMY BY THE NEW METHOD, WITH REPORT OF ADDITIONAL CASES.

(This paper will be published in full in the September issue of the JOURNAL.)

By B. F. BAER, M.D.,

Philadelphia.

Since the last meeting of the Society Dr. Baer had operated on twenty-four additional cases. In this series there has been but one death. This case together with the one in the first series gives a mortality of two in thirty-four cases. His experience leads him to believe that the method is a practical as well as an ideal one. In speaking of the disadvantages of total extirpation (weakening of the vaginal roof and shortening of the vagina), he states that Eastman, the father of the operation, and Chrobak, whose work is equally commendable, both practice a modified form of total extirpation. They now leave the vaginal attachments of the cervix after destroying its central portion by the cautery, knife, or some other means. Baer claims that the technique of this modification is faulty because it opens a way for the entrance of septic germs and because it destroys cervical tissue and makes drainage necessary. *En passant*, he states that "drainage in abdominal surgery is a delusion," out of 227 abdominal sections for all forms of disease of the ovaries he has used a drainage-tube in but two per cent. of the cases, and the mortality is less than three per cent. Polk's method of doing hysterectomy is preferred to that of Eastman or Chrobak, because it is apt to be attended with less suppuration, but it has the objections which pertain to any operation which completely removes the cervix.

Baer states that there has existed a misconception of his method. It had been thought that he was indifferent whether the raw end of the cervix was covered or not, but a careful reading of his original description would show that he stated that when the surfaces were not com-

pletely covered by the retraction of the stump, he folded the peritoneal surfaces in from above by the Lembert suture. Another point concerning which there has arisen a misconception is his treatment of the cervical canal. The viscera plug which he states that nature has provided for the purpose of preventing the entrance of septic matter from the vagina is not disturbed before, during, or after the operation. If the cervix is not in a healthy condition then the operation for total extirpation is indicated preferably after the method of Polk.

He takes Dr Dudley to task for calling his operation a modification of the Dudley-Goffe method. In this method the mass of the cervix is constricted and therefore the provision for drainage is necessary as shown by the reported case. He regards this suppuration and its treatment as dangerous and condemnatory of the method.

He recapitulates the principles in supra-vaginal hysterectomy.

Control of hemorrhage by ligature of blood-vessels in the broad ligaments.

Non-constriction of the cervix, thus avoiding suppuration.

Non-disturbance of the cervical canal, so preventing sepsis from the vagina.

An entirely detailed history of cases is then given.

On motion, the discussion of the subject of treatment of fibroid tumors was postponed until all the papers were read.

Abstract of a paper entitled:

THE DEVELOPMENT OF THE INTRA-PELVIC TREATMENT OF THE STUMP AFTER HYSTERECTOMY FOR FIBROID TUMORS AND ITS PRESENT STATUS.

By J. RIDDLE GOFFE, M.D.,

New York.

Dr. GOFFE reviewed the history of hysterectomy, claiming the honor of the first previously diagnosed case for an American, Dr. Kimball of Lowell, Mass., in 1855. Later, Koeberlé and Péan of France established the operation. They introduced the clamp and loop and treated the stump extra-abdominally. Schröder of Berlin followed by A. Martin, Brennecke and Zweifel brought into popular notice and use the intra-peritoneal treatment of the stump. But Schröder, to whom the credit of this operation is due, never succeeded in reducing his mortality below thirty per cent. Martin, however, improved it and

Zweifel finally brought the mortality down to ten per cent. Later, Zweifel gave up the suture for the continuous chain ligature.

The author then described the well-known method of disposing of the stump which was devised by himself with the assistance of Dr. A. Palmer Dudley. He referred to a record of fourteen cases operated upon by himself and others with two deaths. He considered that the modification by Heywood Smith, of London, and Milton, of Cairo, Egypt, who tied the vessels in the broad ligament and thus avoided the ligating of the pedicle, made his operation an ideal one. Twenty operations, thus modified, had been reported with one death.

Dr. Goffe referred to Zweifel's statistics, whose method he claims is essentially the Goffe-Dudley one, as presenting the best results of any operation, showing a mortality of two in a series of fifty-one cases.

The objection to the method of total extirpation advocated by A. Martin and Chrobak, and practiced noticeably by Drs. Polk and Krug in this country, lay in the difficulty of removing the cervical stump. In the author's opinion the leaving of this stump leaves the vagina in its normal condition and avoids in the pelvis the presentment of a raw surface for adhesions and contractions. He, therefore, maintained the superiority of the Dudley-Goffe method.

Abstract of a paper entitled:

SEPTICÆMIA AND ITS TREATMENT BY OXYGEN.

By ANDREW F. CURRIER, M. D.

New York.

The disease has many varieties or, perhaps it is better to say, grades of intensity, but only those forms and phenomena with which the gynæcologist and obstetrician are apt to be confronted are considered.

It is only since the development of bacteriological science that our knowledge of the etiology of this disease has been definite, and we must depend on future knowledge of the micro-organism and its products for the settlement of questions concerning prognosis and treatment. The author gives a resumé of the present knowledge of the subject.

Germs are found in the blood and the virulent effect that they or their products cause depends on their number, their vitality, and the resisting power of the individual. It is supposed that normal blood does not tolerate pathogenic organisms. When they are present pha-

gocytes destroy them. If these scavengers are not able to do this the symptoms of septicæmia arise.

In speaking of the basis of the present pathology of septicæmia, the author reviews briefly the experimental work in producing septicæmia by inoculating animals and human beings. Escherich examined milk obtained from the breasts of thirteen women who were suffering from puerperal fever. In nine were there excoriations of the nipple or glandular abscess. Ten cases showed staphylococci from both breasts, and one showed the same organism from one breast. The uterus was supposed to be the origin of the trouble in all these cases. Eiselsberg made the diagnosis of septicæmia in a number of cases by examination of the blood.

The microbes found in cases of septicæmia are the streptococci and staphylococci together with their soluble products, but in cases of mixed infection other microbes may be found. The bacterium coli commune, ordinarily a harmless inhabitant of the intestine, may become pathogenic when a favorable soil is offered by decomposing material.

The author states that the forms of septicæmia necessarily met with in the practice of gynecology and obstetrics may be the result of:

1. Decomposition of retained material in the intestines with absorption of toxic products resulting therefrom.
2. Absorption of the products of retained and decomposed material, following abortion or labor at term, through the uterine lymphatics or any divided portion of the uterine mucous membrane.
3. Intoxication associated with surgical procedures upon the abdominal and pelvic organs.

The importance of relieving the intestines of offending matter is emphasized. The second form may present mild symptoms and be readily susceptible of treatment or may be so severe that treatment is without avail. The third form is usually attributed to some fault on the part of the surgeon, dirty hands or instruments. The author states that this is but a half truth. Absolute cleanliness is comparatively unattainable and vigorous scrubbing by removing the protecting epidermis may invite infection.

Symptomatology. The paralysis of the muscular coat of the intestine, the uncontrollable vomiting, the obtuseness of the intellect, or mental excitement with spasmodic movement of muscles show the effect of the poison upon the nervous system. Coincident with these symptoms may exist the greatest activity of the eliminative organs, skin, kidneys, intestines and lungs, trying to get rid of the organism or

its products. With favorable conditions for the development of the toxic germs the struggle is an unequal one. The object of the treatment is two fold—to sustain the natural forces so that the healthy elements of the blood may be victorious in the struggle which we are told they are constantly waging against the toxic elements, and, in addition, to use such means as shall destroy or neutralize the effects of the toxic agents. To accomplish the first result use concentrated food substances, milk and an abundance of alcohol. In regard to the destructive effect of oxygen on these micro-organisms, the writer quotes a personal communication from Professor Welch of Johns Hopkins University, who says :

“I do not think it will be easy to explain the beneficial effects of inhalations of oxygen, which you have observed in cases of septicæmia, by any known influence of oxygen on the bacteria themselves. When bacteria are submitted to an atmosphere of oxygen under high pressure, some species are killed. Some kinds of bacteria die more quickly when exposed to oxygen than when the air is excluded, but this is generally a matter of days. The products of bacterial growth are often of a very different nature when there is free admission of oxygen than when this is excluded. Then one has to consider whether a beneficial therapeutic agent which has no apparent effect on the bacteria or their products may not enable the animal organisms to contend more successfully against the bacteria. The question, you see, is a complex one, but I do not think that you would be warranted in believing that the good results of your treatment are attributable directly to a germicidal influence of the oxygen on the bacteria themselves.”

“The negative evidence of the value of oxygen is shown by the distress of insufficient supply, and the anæmia which is so common in the winter among those who are shut up more or less completely in overheated and under-ventilated houses. The ordinary sick-room, twelve to fifteen feet square, with a patient and attendants, who require sixteen centimètres of atmosphere per respiration, with a stove fire or hot air from a furnace, and with the combustion from lamps, gas, or candles, the windows being tightly closed, is not a favorable condition for the patient who has to remain in the room all the time. The difference in results between a deficient and an abundant supply of oxygen is seen in the records of treatment of epidemics of typhus fever and other infectious diseases when the cases in one series are treated in hospital buildings and in another in tents. Another instructive fact is the comparative absence of septicæmia among Indian puerperal

women so long as they lead an out-door life ; and the same is more or less true of all women who lead an out-door life. This also is indirect evidence but nevertheless quite convincing. On the other hand, if it is not oxygen which guards against septicæmia in such women, it is not cleanliness, that being unknown as it is understood in well-appointed hospitals ; and, again, when these people become partly civilized and live in houses they suffer with infectious diseases like other people."

The use of pure oxygen with a proper pressure is followed by deeper respiration, warmth of the extremities, perhaps warmth of the entire body, increase of the pulse and a more natural color of the body if it has been dark or pale. One of the most noteworthy symptoms is the drowsiness and sleep induced by it. The only ill symptom noticed was pain referred to the region of the stomach, which was probably due to the swallowing of the oxygen. The author gives the histories of two cases in which it was used to advantage.

DISCUSSION OF THE PAPER OF DR. CURRIER.

Dr. MUNDÉ: Septicæmia is a disease I have very often seen in consultation. I have come to the conclusion in years past, and the conclusion is verified by every additional experience, that after the cause of the septicæmia has been removed, the matter seems simply to resolve itself into the question : which is going to last the longer, the disease or the patient. So far as our therapeutical resources are concerned we are practically helpless with the exception of helping the constitution of the patient to keep alive as long as possible. The oxygen recommended by Dr. Currier to-day is simply another thing to aid in keeping the patient alive. I presume we must now take it for granted that septicæmia is due to a bacteria, which I have never before regarded as entirely proven. But assuming that that is the case, we certainly know that we have no remedy that will kill it, and it therefore seems to me that Dr. Currier has added an agent to our very limited store of stimulants and nutrients to keep the patient alive until the patient can throw off the disease.

Dr. CURRIER:—I have nothing to add to the paper, except to coincide with Dr. Mundé in regard to the hopelessness of those cases which are seen late in the disease, and which become thoroughly septic in spite of every means we can use. I meant to have said that if the oxygen were to be used it should be used before the nerve-centres were entirely intoxicated ; if used then, while it may not cure in every case, it will cure in some and it will relieve in all.

Abstract of a paper entitled :

THE DANGERS AND COMPLICATIONS OF UTERINE
FIBROIDS.

BY S. C. GORDON, M. D.

Portland, Maine.

In this paper the author makes an uncompromising plea for early hysterectomy in all cases of uterine fibroid, maintaining that the operation is justifiable on the principle of "the greatest good to the greatest number." He said that though the subjective symptoms were not marked, or even though absent at the time of operation, the possible and even probable final results of a growing fibroid being years of pain and invalidism, and not infrequently death from complications, he considered the risk encountered from the operation and even the mortality itself quite overbalanced by the chance of placing the patient beyond the possibility of future distress. Where subjective symptoms were marked his argument applied with even greater force. He did not believe in removing the fibroid without hysterectomy, because when the *uterus* was removed, all possible future complications were obviated once for all. Very early hysterectomy made the operation much simpler of execution and found the patient in the best condition with, therefore, the best chances of recovery.

The author had done during the past year twenty hysterectomies, most of them for fibroids. Of this number four had died. In none of his fatal cases had there been simple, uncomplicated fibroids, but in all of them severe inflammatory changes had taken place in the appendages, or adhesions to the tumor or in the peri-uterine tissues had added to the difficulty of the case. In all of his cases he had found some element of danger to life or in delayed operation. All of these patients had suffered for years, and he believed that with an early operation the lives of all would have been saved.

His operation is performed with catgut for the most part, though the broad ligament is first tied beneath the fallopian tube and close to the uterus with a silk ligature. A catgut suture is then placed an inch outside the silk and the broad ligament is cut and sewed over and over until the uterine artery is reached. This is tied, the peritoneum stripped off in front and behind, and the cervix enucleated. The peritoneal flaps are then closed without drainage. The following are the author's conclusions:

1. Uterine fibroids are always more or less troublesome, and in a large majority of cases produce a state of chronic invalidism.
2. In a large percentage of cases they are complicated with excessive hemorrhages, peritonitis, salpingitis and ovaritis, with purulent collections and adhesions, producing continual suffering.
3. Many of them do not cease growing at the menopause but increase.
4. Many undergo degeneration, either calcareous, cystic, or malignant.
5. Hysterectomy is not a very dangerous operation if made in the early history of the case—no more so than ovariectomy.
6. In addition to the saving of life, it relieves (in nearly all the cases) the woman from a life of invalidism.

Abstract of a paper entitled:

THE OPERATIVE TREATMENT OF FIBROIDS OF THE UTERUS.

BY MATHEW D. MANN, M. D.

Buffalo, N. Y.

The author presented a series of sixty-four laparotomies performed by himself for uterine fibroid and classed them as follows: Oöphorectomy, nine, with one death; myotomy, seventeen, with one death; supra-vaginal hysterectomy with the clamp, twenty-one, with two deaths; abdominal hysterectomy, (complete) fifteen, with one death; supra-vaginal hysterectomy without ligating the cervix, two, with two deaths. His experience with oöphorectomy had not impressed him favorably. In two of his cases, the fibroid continued to grow though the operation was complete. In myotomy he believed in closing over the pedicle and he thought that this operation was valuable in a number of cases without hysterectomy. He had had satisfactory results with the clamp method but felt that it was open to many objections in the matter of technique. He was more than satisfied with his results in total extirpation, his one death from this operation having followed the removal of a large sloughing fibroid which he believed had infected the peritoneal cavity. Dr. Mann acknowledged that his fatal results with supra-vaginal hysterectomy may have been due to faulty technique, and he referred to the advantages of this method over total extirpation in the matter of rapidity and ease of performance and in the fact that it left the vagina in a normal condition.

He concluded his paper with a summary of the indications, in his opinion, in view of the present status of operative treatment of fibroids, for removal of these tumors. These were: for subjective symptoms of marked intensity, irrespective of the size of the fibroid; in cases of sloughing intra-uterine tumors with general infection he advised hysterectomy.

Although he believed in allowing patients to decide the matter of operation in each case, he predicted a great future for the operative treatment of uterine fibroids.

Abstract of a paper entitled:

PUERPERAL ECLAMPSIA. THE EXPERIENCE OF
THE BOSTON LYING-IN HOSPITAL DURING THE
LAST EIGHT YEARS.

BY CHARLES M. GREEN, M. D.

New York.

While acknowledging the occasional occurrence of puerperal convulsions from various non-uræmic causes, the author maintained that in the vast majority of cases of this disease the cause lay in "acute parenchymatous nephritis, in renal insufficiency, in acute renal suppression with retention in the blood of excrementitious materials and consequent uræmic poisoning." He presented the experience of the Boston Lying-in Hospital between 1885 and 1892 inclusive, excluding the years previous to the adoption of modern aseptic methods. He reminded his hearers of the changes in the visiting and house-staffs incident to hospital management, as explanatory of any minor differences of method. No opportunity had occurred for the prophylactic treatment of these cases, as "waiting cases" of pregnancy were seldom received, and no case of eclampsia had been refused admission; nevertheless, as the urine of all patients was examined upon entrance to the hospital, proper treatment was immediately extended to those about to be in labor whose urine showed an abnormal amount of albumen. The hospital treats about five hundred patients yearly and has received during the eight years under discussion thirty-six cases—averaging four and-a-half yearly—drawing the patients principally from the class which does not receive any supervision during pregnancy. The author divides his report into three divisions, viz: the cases of *Ante-partum* Eclampsia, thirteen cases; *Inter-partum*, eight cases; and *Post-partum*, fifteen cases.

In *Ante-partum Eclampsia* the author believes it to be "certainly legitimate to endeavor, when it can be done without undue risk to the safety of the maternal life, to treat it without obstetric interference" and believes that well-directed efforts will in a small proportion of cases succeed. The treatment lies first in an effort to control the convulsion by ether inhalation in preference to chloroform. Chloral hydrate per rectum is used as a sedative between the attacks. Morphia is not used. The action of the skin is excited by the hot-air and hot-water bath and the careful use of pilocarpin. The bowels are affected by elaterium, croton oil and enemata, and the kidneys by a weak solution of cream of tartar, digitalis and acetate of potash. The hypodermic use of brandy, digitalis and nitro-glycerine is practiced, but venesection is not approved and never performed. When labor has been induced, manual dilatation is preferred to other means; in some difficult cases the cervix has been divided. "Podalic version and manual extraction is preferred to forceps, unless the head is engaged."

Of the thirteen cases in this class the maternal mortality was six or forty-six per cent.; the foetal mortality, nine or sixty-nine per cent. Of the whole number, labor was induced in six, non-viable, and not induced in three; in the four viable cases it was induced in all. *Inter-partum Eclampsia*. Delivery is practiced as soon as possible upon the first seizure under an anæsthetic, and the patient subsequently treated with chloral, pilocarpin, hot baths, mild diuretics and stimulation, if necessary. The mortality in this class, of eight patients, shows the loss of two mothers or twenty-five per cent., and two children or twenty-five per cent. One of the latter, however, was killed by craniotomy, owing to a deformed pelvis in the mother. *Post-partum Eclampsia*. The treatment in these cases is the same in the main as that in inter-partum cases when the foetus has been delivered. It consists in sedatives and mild stimulation of the kidneys.

Of the fifteen post-partum cases presented all but one were at full term and twelve were primiparæ. Two cases were twin pregnancies. The mortality was: one mother or six and-two-third per cent.: children, two or twelve per cent. Of the latter, however, one died from cerebral hemorrhage on the third day and the other was non-viable.

The *general result* shows a maternal mortality of twenty-five per cent. and a foetal mortality of fifty-two per cent., but if the non-viable children be excluded the foetal mortality is reduced to eighteen per cent. In conclusion, the author makes the following observations:

"The relation to maternal results of the number of convulsions in

any given case, as shown in the statistics above recorded, is as follows: The twenty-seven mothers who recovered had from one to twenty-five convulsions respectively; and the nine who died, from two to twenty-four. Or, by averages, those who recovered had five and-three-tenth convulsions; and those who died, ten and-eight-tenths, or more than twice as many. The prognosis in any given case, however, appears to depend more upon the time when the convulsions occur, upon their severity and frequency, upon the length of the labor, the depth of the coma, and the degree of kidney insufficiency, than upon the number of convulsions.

"The relation of the number of convulsions to the foetal prognosis is of practical importance, as the question of obstetric interference, when the child is viable, should depend, in part at least, on the probable ability of the child to withstand the dangers of repeated convulsive attacks of the mother. Of ten ante-partum and inter-partum cases, in which the child was viable, (one case is rejected because the child was macerated, and one because craniotomy was performed on account of pelvic deformity), eight children were born living after an average of three and-nine-tenths maternal convulsions; and two dead, after an average of five and-five-tenths convulsions. One child was born dead, however, after three maternal convulsions; and one survived seventeen maternal attacks and was delivered alive while the mother was comatose.

"The above recorded cases are too few for deductions of value in this particular; but it may be said that the foetal prognosis depends rather upon the frequency, duration, and severity, than upon the number, of the maternal convulsions."

The meeting then adjourned for luncheon.

The afternoon session convened at three o'clock, the President in the chair.

DISCUSSION OF DR. GREEN'S PAPER.

Dr. A. F. A. KING, of Washington, D. C. There is one method of treatment to which Dr. Green has not referred, namely, that by Dr. Jewett, of New York, the hyperdermic injection of fluid extract of veratrum in cases of convulsions. The different methods practiced by Dr. Green are what we all know to be correct. I think the paper a valuable addition to the subject of eclampsia.

Dr. MANN: I merely want to say that I have used the treatment

mentioned by Dr. King and have had exceedingly satisfactory results from it.

Dr. BUSEY, of Washington, D. C. : In listening to Dr. Green's paper I was somewhat surprised at the mortality of twenty-five per cent. It is true that the class of cases with which he was dealing was unfavorable, being brought into the hospital at the time of or after the convulsions. In private practice twenty-five per cent. would be very high; in fact, I have reached the conclusion that there ought to be little or no mortality in private practice if the physician who has the case in charge does not neglect it. If he is aware of the pregnancy in its early stages, certainly such methods will be adopted as will obviate eclampsia. If the patients are instructed to observe and measure their urine, the first indication will soon be brought to your attention, and if that is the case certainly some measure of prevention ought to be adopted. I am sure that many cases might in this way be prevented.

Dr. REYNOLDS, of Boston : I think one of the most interesting points of Dr. Green's paper is its emphasis of the fact that the prognosis for both mother and child rests more on the severity of the convulsions and the frequency with which they occur than on any other one factor. It has certainly been my experience that after observing a single convulsion in eclampsia and the state of the patient for the next fifteen or twenty minutes, I have been able to give a prognosis in which I have seldom been mistaken. I certainly cannot agree with the opinion of Dr. Busey that puerperal eclampsia can be wholly averted in private practice. I have seen two or three cases which seemed to me to controvert that position wholly. One was that of a woman seven months pregnant, in charge of a very careful obstetrician. Her urine was examined by him as a matter of routine, although it was in normal condition. On the morning after such an examination she woke her husband early by a convulsion. She lived within a few doors of the doctor's office. He was there within ten minutes, and I saw her in consultation ten minutes later. The convulsion was extremely severe; the woman was in deep coma. We delivered her at once. We subjected her in the course of the next eight or ten hours to every form of treatment known to us, including venesection. She died before night. There were no symptoms the day before.

I was struck by the proportion of twins referred to in the paper by Dr. Green and think it interesting as evidence of what I believe to be a not unimportant point in the case—the existence of extreme distension in undue proportion in cases of eclampsia.

Dr. DAVIS, of Philadelphia: As an index of probable danger in puerperal cases, I have for some time given attention to the percentage of albumen contained in the urine; and in over thirty cases in which the examination has been carefully conducted in regard to this point, where the percentage of urea drops below two and a half I have had occasion to pay especial attention to prophylaxis. As to treatment, I would say that the administration of atropia where the pulmonary feature was becoming a threatening factor has been of decided advantage. Further, where all other forms of treatment seemed unavailing, the use of calomel as a diuretic in one case especially was of positive value, the patient secreting urine and finally recovering. As to the cases reported by Dr. Green—one case especially in which the child survived after severe eclampsia—it would interest me to know what was the condition of the placenta in that case. In my observation the condition of the placenta has been a matter of great importance to the fœtus, and cases of stillborn children after or during eclampsia have occurred, in my observation, most frequently when pathological changes had been taking place in the placenta during pregnancy. This also is a ground for terminating the pregnancy. The most remarkable recent contribution to the literature of this subject before Dr. Green's is the interesting work of a well-known obstetrician who anæsthetizes his patient completely with ether and proceeds to deliver her upon the basis of a surgical operation.

Dr. GREEN: In regard to what Dr. Busey has said, I brought here the facts as clearly and honestly as I could bring them, to show what could be accomplished under these conditions. I am ready to admit that the results would have been better in private practice than those obtained and shown in this paper. It is to be remembered, however, as a careful perusal of the paper will show, that many of the cases were very bad, that a large proportion of them were brought into the hospital in a state of coma, having had a good many convulsions; some of them had been in convulsions for days. I was interested in what Dr. Busey said about prophylaxis. I agree with what Dr. Reynolds has said, that there are cases which will occur in spite of any prophylaxis and which will die in spite of any treatment. But prophylactic treatment and careful observation during pregnancy will tend to prevent eclampsia. It is my custom in my private practice, without unnecessarily alarming the patient, to ascertain the condition of her urine. We know that in these days, where there is a water-closet everywhere, many women never use a chamber-vessel and

never see their urine. Hence I advise a pregnant woman to use a chamber at least once in twenty-four hours and, where she finds a concentrated urine, a strongly acid urine, to notify the physician of the fact. I believe that the constant irritation of a strong and acid urine is very prejudicial to the interests of the patient and may lead on to other symptoms which may culminate in eclampsia.

DISCUSSION ON FIBROIDS.

Dr. MUNDÉ: I shall confine myself almost exclusively to Dr. Gordon's paper. I have had some experience with hysterectomy for fibroids—I think eighteen operations—and my position in the matter may very easily be guessed at when I say that on the average I would consider that only about ten per cent. of the cases of uterine fibroids that have come under my observation have warranted, in my opinion, any such operation as removal by hysterectomy. I refer to cases that could not be removed by the vagina. Therefore I cannot express myself strongly enough when I say that I think the view that Dr. Gordon takes, the practice that he advocates, of removing, as I understood him to say, every fibroid of the uterus with or without the appendages—probably with the uterus and appendages—as soon as it is recognizable by an examination, is utterly reprehensible. If we allowed this to become the rule, there would be very few women running about beyond middle age with ovaries and tubes and uteri. We all know that fibroids are so common that each one of us who sees any number of gynecological cases will see perhaps two hundred cases of fibroid a year, and we would be doing one hundred-and-fifty to two hundred hysterectomies a year, of which at least seventy-five per cent. would be unnecessary. I would like to ask the Doctor where he draws the line—where any of us is to draw the line. A fibroid as large as a hazle-nut has begun as an embryo. It may not grow. Are you going to take out every uterus with its appendages for a fibroid the size of a hazle-nut? It is monstrous. I do not think that Dr. Gordon really says what he means. I really believe he wrote that paper to a great extent for the sake of argument. I believe we ought to stand up as a society and protest against so much hysterectomy. I do not disagree with Dr. Gordon in some cases. A fibroid that grows, that causes the woman a great deal of trouble or is accompanied by diseased tubes and ovaries, that in any way inconveniences the woman sufficiently to make her feel she would like to be rid of it—such a fibroid you are justified in removing. But to remove every little knob or knuckle that projects from the uterine surface—I do not

believe that anybody is going to do it, or that the Society is going to countenance any such doctrine.

Dr. POLK: Dr. Mundé unquestionably takes the right position so far as the small, insignificant developments which occur in connection with the uterus are concerned; but after all it is not so much the anatomical condition which interests us as it is the therapeutical result; and when, as is the case not infrequently, these small tumors give rise to a great deal of vexatious annoyance, I am sure Dr. Mundé will not array himself upon the side of those who object to their removal. Every patient has a right to demand relief from distressing symptoms if that relief can be obtained without injury to her health. We have heard here to-day a long array of these operations where there have been no ill-symptoms, proving that even small fibroids can be taken out, and yet the patient live and live well. My observation is to the effect that when a woman has a uterus within her which is deprived of its ovaries—this may be a little aside from the question—she is better without that uterus than with it; and if the day comes when we will remove the appendages and along with them the uterus, I think we will have made a decided advance in the proper direction. All this applies to the removal of even small growths.

And centering my remarks around the proposition laid down by Dr. Mundé, I will say that I go as far as he does, provided he approves of the removal of the small fibromatous uterus which by virtue of its presence invalids the woman. I belong to that portion of our Society which believes in the entire extirpation of these growths, that is barring those cases where we can enucleate them. It seems to me that there can be no question as to the advisability of making a complete rather than an incomplete procedure. I know full well that those who leave in a portion of the cervix claim that it is the ideal operation, and if I mistake not they base that claim upon the assertion that it takes less time and leaves the floor of the pelvis intact. So far as time is concerned, it can be done as quickly by one method as by the other, and so far as relates to leaving the floor of the pelvis intact, there is nothing to be said in favor of one operation that cannot be said in favor of the other. It is the simple question of leaving a portion of the organ in position, which is there as an obstacle to the smoothness of the patient's convalescence, and we all know that in this process provision has to be made for a subsequent development of an accumulation as a consequence of the retention of a portion of the cervical wall. Any operation which has

to make such provision we all see at once is of necessity incomplete. Therefore, the incompleteness of the process, and the fact that it has nothing in its favor which cannot be justly claimed for the other, constitutes in my mind the fact that the incomplete removal is an inferior procedure as compared with the complete.

Dr. KRUG, of New York: In regard to what Dr. Mundé has said, I must coincide with him that there is only a certain percentage of fibroids that demand any treatment whatsoever, but I must say that the percentage is a little higher in my practice than ten. I can only endorse every word that Dr. Polk has said—that it is not the size of the fibroid, and not our inclination to operate, that ought to have anything to do with the indication for doing the operation—it is the symptoms the woman is complaining of. You can have quite a large-sized fibroid which does not give rise to any symptoms whatever; and you have to operate on small fibroids which make a woman a chronic invalid. In such cases the patient will frequently beg of you to operate. And I think we ought not to deny to the woman the benefit of our surgical skill. We cannot afford in the year 1893 to limit the operation by the size of the tumor. Twenty or thirty years ago one was loath to operate on an ovarian cyst unless it became so large that it had to be tapped first. We are beyond that. But we are not so far yet as to say that the fibroid has to be removed on account of its being there, although I shall go so far as to say that a fibroid has got to be removed, no matter how large or small it is, as soon as it makes symptoms of such a character that it is of vital importance to the woman to be cured and to have it taken out. Results now are very different from what they were thirty years ago, and it is simply the results that give us the right to advise a woman to have the uterus removed and not wait until she is bed-ridden, until she has fatty degeneration of the heart, or complications of the kidneys, and repeated attacks of peritonitis.

Dr. JOHNSON, of Washington: I differ somewhat with those who have spoken, since the method I have used is the one they do not seem to endorse. The manner in which I have done the operation has been as Bancroft has advised, by the wire *serre-nœud*. It has seemed to me a quicker operation, one that could be done in a way to certainly arrest the hemorrhage, having the hemorrhage entirely under your control by simply tightening up the wire. I have had twenty-five or thirty of these operations and did only one by the method proposed by Dr. Baer. I think the average time taken to

perform with *serre-nœud* has been thirty to thirty-five minutes. The time occupied by me in performing the operation advised by Dr. Baer was an hour to an hour and a half. The claim that is made that the time for the operation, where total extirpation is practiced, is so much shorter than the other is not a point that counts for very much, for one would rather the patient should go two weeks longer in convalescence and get up and go about well than to suffer to the extent which they frequently do from prolonged manipulation among these vital organs. So far as my experience goes, the operation which gives the least amount of manipulation, which secures the patient so completely against hemorrhage, and in which, when done properly they do not die of sepsis, is the preferable one. I agree theoretically with total extirpation, but practically my experience is the other way. A point which has not been mentioned in the discussion of this subject is the removal of the appendages, or the arrest of the hemorrhages which occur along with these growing fibroids, and at the same time the arrest of the growth of the fibroids. While this, perhaps, is no more certain than the occurrence of the menopause—which we all know is not as certain as the books would have us believe and which in the experience of us all has proven to be a poor staff to lean upon—yet in the experience of about twenty cases where the women's lives were very seriously threatened from hemorrhage, the operation has been entirely successful and the hemorrhage and growth have ceased. So that my experience with that mode of doing the operation has been a very successful one. So far as relates to doing the operation in a case in which a small fibroid exists, I agree with what Dr. Polk has said, that it is quite possible to enucleate these fibroids from their position in the uterine substances, clean out the cavity and stitch together the opening with catgut or some other material which would not do much, if any, harm. In those cases the success has been very good and would relieve us from the necessity of doing so difficult and dangerous an operation as total extirpation.

Dr. JOSEPH PRICE, of Philadelphia: My experience with hysterectomy has been rather large and varied. Dr. Gordon called our attention to the tendency to retrograde. This has been my experience and it has been unfortunately a painful one. Occasionally we hear a physician of prominence and large experience, a country practitioner known throughout his own State, in County and State discussions condemning in unqualified language surgical interference with these growths, saying he has had six, or ten, or twenty of them and none of them have

behaved badly. But if we treat him as a lawyer would treat a witness, if we ask him the simple question, "What became of these patients? Have you any knowledge of their present whereabouts; can you place your hands on them now and say that the tumor is behaving well?" The same holds good as well in appendicitis. I really think it is important when physicians condemn the work of specialists that they should give definite data and tell us positively that the patient still carries her tumor and that she has had no inconvenience. Early in my experience I found a good number of them malignant. I lost two in my first eight cases. As to removal of diseased appendages, allow me to say that my experience in this is not with the rapidly growing forms, but I regard the removal of the appendages as a valuable procedure. As to the importance of drainage, I should simply have to give up my work if I abandoned drainage. I value it above all other means or methods of saving patients. I do but few of what you would call "simple" operations. I operate constantly for advanced disease, and I constantly find extensive fistulæ, adhesions, and complications to deal with, in order to remove such forms of disease, to remove the disorganized tubes and ovaries; and if I failed to drain I am satisfied I should lose a goodly number of cases. As it is, my mortality is a little over five per cent., and I am satisfied it is largely due to a uniform practice of drainage.

Dr. FORD, of Utica: I live in a town of about fifty thousand inhabitants and I live with my people after I have operated on them and before. Some of you who live in large centres lose sight of your patients after your operation and include them in your list of recoveries. I see a good many cases that come up in the country, that have been operated on. I do not think the results would warrant me in doing the operations in my town. My reputation is the good-will of the men who continue to know me right where I live. What I mean is that among my patients I would not risk the surgery that is risked in the larger towns, even if I were able to do it with the success which better men have achieved, for the reason that I believe that the results in future years are not wholly as satisfactory as some operators would lead us to believe. I do not think that you men living in the large towns can put your fingers on as many patients whom you have operated on as I can on patients whom I have treated. And, similarly, many of the patients on whom you have operated I have to work on. I have them in my hospital and I see the results are not always what they are reported originally—and

honestly. Therefore I am in sympathy with what Dr. Mundé says, that uteri that have small growing fibroids in them, fibroids which are giving symptoms even, and yet symptoms which are not severe enough to lay the woman up, or symptoms that are not greater than the common ailments of life, do not warrant us in surgical interference. On the other hand, it is well known by many of us, it is believed by some others, that the small, simple fibroids of the uterus may be relieved in other ways than by surgical extirpation. I know that many of the simple fibroids are relieved by galvanism. We all know that galvanism does not do anything for very large growths—nobody is going to claim that in these days; but when you come to talk of total extirpation for the relief of small fibroids I think that the subject of what galvanism has done and is doing for the relief of such cases at least deserves discussion; and unless the appendages are diseased I think a fibroid smaller than a cocoanut cannot be warrantably removed and ought to be submitted, at least, to an intelligent man who would give a fair trial with some other means, such as galvanism. I have never done any hysterectomy except by the extra-peritoneal method. I have never done any with Baer's method. I have always used the clamp.

DR. GILL WYLIE: My first fibroid was done just ten years ago last February, and since then I have been continually operating on them at intervals, and my first operations were confined almost exclusively to cases where something had to be done in a surgical way to save the patient's life. I do not believe that the subject has yet reached the point where we can formulate definitely any one operation that should be done in every case, or where we can say that every woman with a fibroid of the uterus should have it removed or treated surgically. I think, however, that we have had a good deal of experience in the treatment of fibroids without surgery, and, so far as I know, with very poor results. And in answer to the last speaker's remarks, that our cases from the city disappear and we did not hear of them again, I would say that we get a good many of them from the country, and sometimes we get them after they have been treated and by treatment which has very seriously complicated matters. I have had the honor of treating two that Dr. Ford had tried electricity on and in both there was local peritonitis and hæmatoma. The patients recovered. I will say that I think all of us, as we do better and succeed better, are inclined to do the more radical operation, that is, to remove the whole uterus in many cases; but I would not be willing to say that I would use any one method without

first seeing the case. I would say unhesitatingly that my first aim in dealing with the patient is to save her life; that I am going to operate to give me the best chance of saving the patient, no matter whether it causes me trouble afterwards. I am not willing to follow any other plan so far as the patient is concerned. I like to do it by the method which gives the best results, and I think that we must vary that method. I do not agree at all with one of the speakers, who advocates removing the uterus, and tubes and ovaries whenever a woman has a fibroid. I have often followed the history of fibroids and found that many of them do not grow. I have often treated them by curetting for hemorrhage, and the patient has become pregnant and had the child. I have delivered three women where I could make out the fibroids. If a woman came to me with a small fibroid, smaller, say, than a woman's fist, I would not advise, unless it was giving active symptoms, any treatment. If it was giving rise to hemorrhage, I would give it treatment. If it were a very bad one and included an enlargement of the whole uterus, I would probably take the uterus out if it was beyond a certain size. If it were smaller than my fist I would be inclined to take the tubes and ovaries out, as the safest and best operation; also if it were above that size, or if there were many of them, or if the case was complicated by chronic endometritis. And, by the way, I find in very many cases where there are small multiple fibroids that we have very frequently a form of endometritis that is almost incurable except by removing the tubes and ovaries when small or, if larger, taking the whole uterus out. I certainly believe in the surgical method, because I think my success has been very good, especially in the last four or five years. I tried electricity in the most thorough way and did not denounce it until I had investigated it, and I have never seen it do more than complicate cases, where it was used strong enough to have any effect.

Dr. MCGONIGAL; My experience has not been very large. I remember that it was but a while ago that Dr. Keith began advocating that there were certain conditions of fibroids which demanded that they should be operated upon; and certain conditions of fibroids which were not operative. It seems to me as though we have gotten where we are doing a great many more operations than we used to do, and it seems to me as though they were in the main justifiable. Of course Dr. Gordon went a long way when he said that all uteri which had fibroids should be taken out. However, Dr. Gordon's success has perhaps justified him in that assertion. Still, there are a number of uteri which lie there as a menace to the happiness and the comfort and the health of

the patient; and the surgery of the day allows them to be taken out by the different methods; and, by the way, it appears to me that we have a great many names for a great many methods that are very nearly the same. I have listened to the description of the method of Dr. Baer, which seems very simple, but I have never had the pleasure of doing it. The method of Drs. Goffe and Dudley I have had the pleasure of doing three times and assisting at the operation another time. The first three cases were successful without a complication, but in the other there was formation of pus and the abdominal cavity had to be opened. The fourth operation I think did badly because the catgut was not properly prepared. It is just possible that the infection came through the cervical canal. However, the patient recovered eventually. In regard to the extra-peritoneal method, I have only had the experience of one case, but that has been such a pleasant experience that I must think that there is, as Dr. Gill Wylie suggests, a middle ground which is better for the patient and which will bring just as much glory to surgery, and that each case must be judged on its merits. It has been my misfortune to have hard cases—large fibroids and those which had existed for a long time. In the last case I operated on, in which I used a wire, I believe if I had done it by any other method the patient would have died. So far as the effect of drainage in hysterectomy is concerned, I will say that my results, in my mind, were favored by drainage. Since the operation has had the advantage of posture by raising the hips, total extirpation is a great deal easier. If I were to make my choice to-day I would say that, with some few exceptions, I would choose the method of Dr. Polk and remove the whole uterus. The operation that relieves the woman of the organ which has given rise to these diseases is the ideal operation.

Dr. A. PALMER DUDLEY: I do not wish to take the time of the Society by any discussion of the subject, pro or con, as to which is the best method of procedure: the total extirpation of the uterus or the leaving of a certain proportion of it within the pelvis. It is well known to many of the members of this Society that I have for years advocated the leaving of a portion of the cervix within the pelvis to hold intact the roof of the vagina and to allow the patient to remain in a more normal condition than she would otherwise be. The reading of the papers this morning, showing statistics of the two operations, is enough for me. But I am getting so frequently "dressed down" for the expression of my views that I hesitate somewhat in pushing them forward. But I wish to take the time of the Society to speak of the extra-peritoneal

method of treating the stump for this reason—that I wish to state my relations with the origin of this method. It is now called Dr. Goffe's method; it is called Dr. Baer's method. The Germans have accepted it as their method without giving us any credit, and although Dr. Goffe has kindly associated my name with his in the operation I ask the indulgence of the Society for a few moments of explanation. I claim the origin of this method very largely for these reasons: It is claimed that Dr. Gamble was the first man to do abdominal hysterectomy. It is a well-known fact that he was not the first man. Dr. Burnham, of Lowell, did the operation a month before him and was assisted by Dr. Gamble. I asked Dr. Gamble if this were so and he told me it was. The first operation that I did of the method to which I gave the name I did in California in 1883, in the fall, before sailing for China. The only difference between it and the operation as done to-day by Dr. Goffe and myself is this—that the ligature which surrounded the cervix was not put within the cavity, but the stump was covered by the flaps from the anterior and posterior surfaces of the uterus. The next opportunity I had of using it was when I assisted Dr. Goffe at his operation. A very short time after I made the operation the second time and showed the specimen to the New York County Medical Association, gave a drawing upon the blackboard, and gave it the title of the "Extra-Peritoneal but Intra-Pelvic Method of Doing a Hysterectomy." I do not wish to take one iota of credit from the gentlemen who have read papers, but I wish to put myself on record as to my relations to the operation. I want to say that so far as the question of drainage is concerned I believe it is only necessary where the fibroid is so large that it has produced a certain amount of peritoneal irritation.

Dr. WILLIAM H. WATHEN, of Louisville: This interesting discussion shows the very rapid progress we are making in the treatment of fibroid tumors and shows too how far we are now from any one opinion as to the best method of treating these things. I am inclined to the opinion that it will never be decided by the profession that any one method should be universally applied. The extra-peritoneal method, the only one in which I have any experience, has been until recently almost the universal method of operating. But now that we have the Trendelenberg position in which we can place the patient, which enables us to reach these structures so easily, the operation is done by ligating the uterine arteries. Time will probably decide that one operation is preferable under one condition, and the other operation under others. What we want to do is to adopt the operations that

have the least mortality, from which the patient convalesces more rapidly and more easily, and which leave those conditions which are least disturbing to the normal relations of the pelvic structure.

Dr. NOBLE : Dr. Gordon's paper, it seems to me, teaches us that we are not to regard fibroid tumors as innocent, harmless growths, and in the spirit of his paper I most heartily concur. I have done sixteen operations, taking out the ovaries for cure of fibroids, and in those cases the patients recovered and were cured, with one exception. I have done but four hysterectomies, and those recovered also. I especially desire to speak about the term "intra-peritoneal treatment of the stump." Now I submit that the method followed by Dr. Goffe and Dr. Dudley and Dr. Baer is not an intra-peritoneal treatment of the stump. It is as much an extra-peritoneal method as the operation with the *serre-noeud*. In reference to drainage—in my early abdominal work I drained everything. Out of the first one hundred and fifty cases I did I drained one hundred and forty. I have never seen any reason to believe that drainage, if properly looked after, was ever the cause of trouble, or that it caused peritonitis or sinuses. I concur entirely with what Dr. Mann has said, that if the tube is properly looked after it acts as a safety-valve and will do no harm.

Dr. GORDON : In reference to the very fine point that Dr. Mundé made, that I would operate upon every little nut, I must confess that my paper may be open to that objection. I mean to say this : A patient comes to me for some trouble. I find a fibroid in the uterus which to my mind is the cause of that trouble. In that case I would operate, I do not care how small it is. I would not go around examining every woman to find if she had a fibroid. When the patient comes to me she comes to me because she has some trouble, and I do not care how small the fibroid is—if I believe it is due to that I invariably advise hysterectomy. I believe that in the majority of cases that is the thing to do. As to complete removal, the paper I read last year before the American Medical Association was entitled "Hysterectomy," in which I agitated entire removal. I believe this is the ideal operation. I believe it is better in every way. As to drainage, I will not make too strong a statement, but practically I never drain. I believe that if you drain you acknowledge that you failed to make your pelvis aseptic. If there is a little pus left somewhere in that pelvis out of the line of this drainage-tube, is it going to take to itself legs and run down to the bottom of the drainage-tube ? It is a little bit of an opening into which something may get, but I do not believe that you are sure that

the germ that may be hidden away in some corner of the pelvis is going to get into it. I believe in through-irrigation and in having everything thoroughly aseptic. If you take the tube out within twenty-four to forty-eight hours, as you ought, I do not believe it has done any good of any consequence. Consequently my rule is never to drain. As to electricity for fibroids, I have no confidence in it.

Dr. GOFFE: As has been said, I believe the first test in regard to any operation is whether or not it is safe for the patient. In my paper this morning I think I showed conclusively that the intra-pelvic method, as used by myself and Dr. Dudley, by Dr. Baer and by Dr. Zweifel of Leipzig, has given the best results of all the methods that have ever been used. In reference to the naming of the method, as spoken of by Dr. Noble, it is not called the intra-peritoneal method; it is called the intra-abdominal or intra-pelvic method, but extra-peritoneal. As to suppuration, I am led to believe that suppuration where it has occurred, is due entirely to infection from the cervix, and that the method can be made entirely perfect by simply disinfecting the cervix. In regard to priority of the operation, and the claim that Dr. Dudley makes, I wish of course that he should have full credit for all that he has done in the matter. He assisted me in my first operation, done in May 1888, and as I said in my original paper we worked it out together and I gave him the credit of naming it. He says that in the fall of 1888 he reported another case in which he described the operation in full. You will see that that was six months after my operation, and although his operation in San Francisco was something of the same method, it differed in detail. Dr. Mann this morning reported two deaths where he had employed the method of leaving the cervix, and he found it difficult to account for the sepsis. I believe that it was due entirely to insufficient dilatation of the cervix. I remember one case of Dr. Harrison's in New York, where he had suppuration under the flaps. He attempted to dilate and did not do it sufficiently. So I think that is the cause.

Dr. MANN: In regard to leaving the cervix, it seems to me that a little piece left is of little use. Those who speak of the "keystone of the arch" have in mind the pictures that are sometimes put in the journals which advocate a certain kind of pessary. It is as far from the true anatomical relation of the uterus as any thing can be. The vaginal walls lie close together, and I cannot see how that little piece of cervix makes any difference. It is possibly a source of harm, and I had a practical illustration of it in a case I operated on seven years ago, where

I removed an ovarian tumor and the body of the uterus with it. In about six months the patient had a cancer of the bit of cervix that was left and died from it. It is certainly a point worthy of consideration. In regard to Dr. Bancroft's operation, spoken of by Dr. Johnson, I mentioned it in my paper. I shall never try it again. I never saw a patient suffer so much as that one on whom I tried it. She got so that she almost ran into the other room when she saw me coming. She got well after a while, but I do not think it is a good operation, for the comfort of the patient certainly. Diseases of the appendages have been spoken of as causing fibroids. I know that diseases of the appendages are very frequently associated with fibroids, but it always struck me it was the fibroids that induced the trouble with the tubes and the ovaries, rather than the appendages that caused the fibroids. Dr. Goffe thinks we ought to do the operation that gives the best results. That is so. But we can only tell what the best results are after we have gathered together a large number of cases. I have gone* around among two or three of my friends here and gotten their results hurriedly. Dr. Polk says he has had thirty cases with two deaths; I reported fifteen cases with one death—and out of a total of sixty-eight cases I find five deaths. That is a pretty good result for a comparatively new operation with which nobody has as yet had a very large experience and therefore have not the skill which they will have later. Dr. Gordon says that there is no use in drainage because there should be nothing septic in the pelvis. I say you cannot open the vagina in these cases of total extirpation, or the cervix in the cases in which the cervix is left, without at least the danger of inoculating the pelvis with septic germs. We know that they exist in the cervix and in the vagina nearly all the time, and I maintain that you cannot render the vagina and the cervix entirely aseptic. Therefore, when you open the vagina or the cervix into the pelvis you run a great risk of inoculating the pelvis with the germs. I say therefore that you ought to put in a drainage-tube. The germs will not grow unless they have suitable culture to feed on—they will not grow on a dry surface. But if we have a certain amount of bloody serum collected in the pelvis, we have all the pre-requisites for the ready growth of these germs. Drainage is done to take out the fluid which would allow the germs to grow—and thereby prevent the growth. It is a question for time so decide, but until he can show better results without the drainage, I think we will continue to drain. In one case in which I drained, everything seemed perfectly dry, but I afterwards removed ten ounces of fluid by the drainage-tube.

Abstract of a paper entitled :

OPERATIONS UPON THE UTERINE APPENDAGES,
WITH A VIEW TO PRESERVING THE FUNCTIONS
OF MENSTRUATION AND OVULATION.

BY WILLIAM H. POLK, M.D.

New York.

(For Original Article see page 649.)

DISCUSSION.

DR. CURRIER: Dr. Polk, in his very interesting and learned paper, laid down the broad rule that the function of menstruation conduced to the health and well-being of the woman and conduced to a greater extent the further removed the woman was from the natural period of the menopause. I think that statement is open to very serious objection and think Dr. Polk would have but to recall the experience of a great many individuals whom he has seen in his own practice, to be satisfied of the truth of my statement. I think that we have all met a great many women who suffered very seriously from the presence of this function, from the very fact that nature does not always work as she should. If it were not so, where would be the advisability of the great number of these operations which are performed for the artificial bringing on of the menopause? And the same objection I think also obtains in regard to the function of child-bearing. And yet I am sure that the main object of Dr. Polk's paper is the encouragement of a conservative tendency, and I should like in addition to the cases which he has recorded to refer to two others which have occurred in my experience in recent years, which illustrate the value of this very principle which he is advocating. One was the case of a sterile woman, very desirous of offspring, who had been married five years and who upon operation was found to have a retroflexed uterus and seriously diseased appendages on the one side and a normal tube and diseased ovary on the other. The diseased appendages were removed. The diseased portion of the second ovary was excised on the plan described by Dr. Polk. The uterus was fixed to the abdominal wall by silver wires passed through each horn. The result was that in six months the woman became pregnant, and last September I delivered her of a healthy child. The other case illustrated the danger that may follow conservatism. In this case the appendages of one side were removed,

the ovary of the other side was partly removed, and within a few weeks serious symptoms supervened, requiring a second opening of the abdomen, and the discovery that papilloma had developed on the side of this ovary which had been operated on. So that while conservatism is in the main a praiseworthy principle, I think that we must not forget the dangers and often serious consequences which may possibly attend it.

Dr. EDEBOHLS: I first desire to give expression to my admiration of the courage of Dr. Polk in bringing before us a number of new propositions. We are not ready yet to pronounce judgment upon many of the questions placed before us, but the very fact that he has drawn our attention to them will result in our bearing them in mind in the work of the next year, and in the near future we will be able to arrive at conclusions better justified by experience. I think with Dr. Currier that it is still an open question and one that Dr. Polk is trying to solve for us, whether the preservation of the function of menstruation is in itself a desirable object; whether the troubles associated with the function, whether the disturbances it creates for the woman, do not more than compensate for any advantages she may derive from the preservation of that function. I believe that Dr. Polk entertains the view that one object of leaving a section of one ovary is to preserve the femininity of the woman. On the other hand, the preservation of a portion of an ovary which cannot by any possibility fulfill its mission—the tubes being gone—may be done at the expense of the risk she runs from disease, which is greater than if the ovary were in its normal condition. Some of us have been for several years past removing only the tube and ovary on one side in case of ovarian cyst-tumor. But all this is largely a question which the future will have to determine.

Dr. WILLIAMS, of Baltimore: I have been extremely interested in Dr. Polk's paper. For the last three or four years I have received a large number of tubes and ovaries in Baltimore—in fact, I have received all that were removed by five different operators—and as a result of my examination in these cases I may be able to say what very few other men can. A very considerable number of the operations are done with absolutely no justification. I should say, as the result of my work, covering at least three hundred tubes and ovaries, that in at least five per cent. of the cases there was absolutely no anatomical ground for removing them. I do not say they did not cause sickness in the women, but from a pathological standpoint I cannot find any reason for removing them in five per cent. of the cases. One of the classes of cases in

which I think they are improperly removed is where the ovaries are small-sized. I cannot agree with the gentlemen who have spoken about the undesirability of menstruation. I have seen a considerable number of young women who have had their ovaries and tubes removed for dysmenorrhœa, and in the vast majority of those cases there is no reason for it. All those women, almost without exception, at the end of a few years regret getting into the surgeon's hand and wish they had gone on and preserved the function which made them women and which did not put them outside the hope of motherhood.

Dr. WATHEN: I am on record as endorsing everything that Dr. Polk has said. I think he deserves the praise of this society for his boldness in presenting this paper, and I think it will have a good effect upon those members of our profession who are so fond of removing the ovaries whether they are diseased or not. I see ovaries and tubes that have been removed in which you cannot see one particle of disease—tubes a little smaller than the normal tube. In these operations we ought to operate to cure the patient with the least possible destruction of organs or disturbance of functions. And if in this manner we can relieve the patient, as Dr. Polk says he can, I think we ought to leave one or both of them open. I am often asked: "Doctor, why do you oppose removing my ovaries so much?" I reply; "Madam, because in a few years when you want them back again I cannot return them." And I have found, as Dr. Williams has said, that some women who are very anxious to have the ovaries removed are after a while very sorry that they were removed. Again, you find that the stoppage of ovulation and menstruation in women occasionally has a very sad effect upon their nervous and mental organism. I have seen them very much disturbed, particularly about the time that the periods should return and they have had serious doubts frequently as to whether they would not finally become insane. I have frequently removed the appendages from one side and left the appendages upon the other. I would not leave a tube if I thought there was very much disease in it, but I remember a case where I left both tubes and took out one ovary, because both tubes were absolutely healthy and the ovary was diseased.

Dr. MANN: At the solicitation of Dr. Polk I have been trying to follow out his plan and have had a number of cases where I have removed portions of ovaries or a portion of one ovary, leaving a portion of one ovary but removing the other and tube. I think in the main the results have been satisfactory. For instance, within the past

six months I saw a young woman who was just about to be married, and I found a tumor as large as my fist from which she was suffering a great deal. I removed the tube and ovary on that side. The other ovary had several small cysts in it which did not bleed. I removed perhaps half of that ovary, cutting out all of the cysts which seemed to be bad. She recovered perfectly, and has since menstruated and menstruated without any trouble. In several other cases I had similar operations. There is one point, however, that we may well consider. Suppose a woman has severe dysmenorrhœa, would it be proper to take especial pains to leave a portion of the ovaries in order that she might continue to menstruate under those conditions? Menstruation would only be a painful process to her, and it seems to me she would be better off without it.

Dr. PRICE: The procedures recommended so beautifully by Dr. Polk have been practiced here by a number of operators, some of the patients having been operated on and afterwards delivered. But in all these cases that I can recall there has been no salpingitis. If the tubes are diseased they will remain diseased, and but little will be accomplished by liberating diseased tubes and ovaries. The good is not accomplished in cases of actual tubal disease, and many of these cases will return to Dr. Polk or go into other hands for a cure. He is right in regard to the partial removal of incipient cyst-tumor and the preservation of healthy structures, but I insist that he is wrong in preserving diseased appendages.

Dr. A. PALMER DUDLEY, of New York: I want to put on record in this connection the fact that I have been doing this kind of work since the first paper was read in 1887. Dr. Price says some of them may come back. They have had a fair trial. I am working along that line every day, saving every ovary I can, and when I have gotten a sufficient history of these cases to warrant a discussion of the subject I will read my paper.

Dr. POLK: The gentlemen have dealt so kindly and so generously with me in this matter that little is left for me to say. There is no question, sir, but that this work is absolutely experimental, exactly as every other kind of surgical work is in its inception experimental. Some of the gentlemen see one side of the shield and I see the other. It may be that theirs is the side which will ultimately be turned to the sun. Whether that be the case or not is a matter of the future. Now, the suggestions made by Dr. Currier are very kindly. There is no doubt about it that when you interfere with the integrity of any glandular organ—and the ovary is a glandular organ—that you cannot tell

what will be the result ; it may be, as in Dr. Currier's case, a development of an epithelial growth which, if not cancerous, is so much in that direction as to make you prefer not to see it ; or you may infect the interior of that ovary, as in one of my cases, and have to deal with the ovarian abscess later ; you may meet with the development of cysts in the remaining portion of the ovary and make it necessary for you to perform a second operation. But when you say that, Mr. Chairman, you say no more of this operation than can be said in kind of any other procedure that is brought up for review ; they all have their failings. Now, so far as leaving the ovary is concerned, as Dr. Price has said, that is an old procedure. It is one which has been practiced time and time again, but it has not had that attention from the profession which it appears to me it deserves. So far as keeping the tubes is concerned, that is a different proposition and the doctor's criticism is correct. It is said that if you excise the tube and leave a portion of it you have dilatation of that portion which remains between the site of incision and the uterus. Then that being the situation we must understand that we have here no ligation. The next point is in regard to the removal of a pus tube—which has been specified by me as a condition demanding or suggesting partial treatment. They are cut right out, but the ovary is left. Now, the ovary is left because of a conviction in my mind that the future will bear me out in the step quite as much as it is the conviction in the minds of some of the gentlemen here that I am wrong. In conclusion, let me say that no man has a right to ignore the inside of the uterus when he undertakes to treat, by operation or otherwise, the appendage, because just as surely as he does he will have a sequence of events which the literature of the subject teaches us to expect.

Papers of Dr. Franklin H. Martin, of Chicago, and Dr. Archibald McLaren, of St. Paul, were read by title.

(For the original article of Dr. McLaren's, see page 664.)

Papers of Dr. Davis and Dr. King were laid over until to-morrow.

Adjourned.

May 16th, 1893.

Evening session convened at 8 P. M.

Abstract of address delivered by

THEOPHILUS PARVIN, M. D., PRESIDENT OF THE
SOCIETY.

In reference to his predecessors in office, the President referred to a number of the most prominent ones with a word of flattering distinction for each and expressed his deep appreciation of the honor conferred upon him by the Society—more marked, as he said, because it had occurred while he himself was in Europe. Of his sixteen predecessors seven were dead, and since the last session of the Society one Ex-President and two members had died.

Believing it the duty of the presiding officer to express opinions, to offer advice and to criticise, he announced his intention to devote the rest of his address without fear or favor to this end.

Referring to the active part taken by Dr. Chadwick in founding the Society, and the wisdom of the term "Gynæcological" to designate it, Dr. Parvin called attention to the true significance of this term in its derivation. This, according to Plato, was primarily from the Greek word *γυνή*, birth, through *γυνή*, woman; therefore, he argued, Gynæcology referred primarily to the function of reproduction in the female and only secondarily to those female diseases which are related to this function. Although it was true that most gynæcologists were primarily obstetricians, in this Society, as a matter of fact, the diseases of woman held the first place and obstetrics a subordinate one. The term should be rescued from the too narrow significance usually applied to it to-day.

It was thirteen years after the founding of this organization, whose membership was first limited to sixty and then to one hundred members, before a rival association appeared. The President, however, believed that the specialty was large enough for both and did not think that amalgamation or even a double membership of their respective fellows would conduce to the benefit of either society. In reference to the election of new members, for whom twelve vacancies existed at this time, he did not believe that the full number should be filled but advised that at least six vacancies be left each year that the Society might always have room for new candidates. *Alteris paribus*, he considered that geographical divisions in this country should influence the selection, so that the Society's influence might be as widely

extended as possible and the fitness of its title "American" be maintained.

Owing to the usual plethora of papers presented to the Society at its Annual Meetings, the evident superiority of some and inferiority of others, the inappropriateness of some for publication in the annual proceedings and the necessity of literary revision in many, a good suggestion would be followed in the appointment of two or three members as associates of the Secretary in the revision and disposition of papers. Another reform, which would give the best opportunity for work in the discussions and also tend to place obstetrics on a plane of equal prominence, in the Transactions, with the diseases of women, would be the selection several months in advance of several subjects to be written upon and discussed, the discussion to be opened also by specified members. Seventeen volumes of Transactions, containing something less than eight thousand pages, testify to the scientific activity of the Society and present a splendid array of knowledge which is both of historical and present value. The question of the union of obstetrics and of the diseases of women in the same specialty, both in the matter of teaching in schools and in practice, is a most important one and the author enters an earnest plea for the recognition of this union under the term "gynæcology" and urges the necessity of every thorough gynæcologist knowing and practicing obstetrics as well. In confirmation of this view, Dr. Parvin introduced in full a letter received from Winckel of Munich, in which the latter discusses the subject at length and gives his reasons why, in his opinion, every gynæcologist should be a practicing obstetrician and *vice-versa*.

As regards the great advance in gynæcology, the cry against unnecessary and too frequent operating especially that involving mutilation of the woman is forcibly referred to. "Preventive medicine is the battle-cry of the day," and in our better knowledge and increasing interest in prophylaxis lies our strongest hope of advance in the future as well as the great safe-guard against excessive surgical interference. As an example of the power of prophylaxis in a very common and one of the most serious of the diseases of women, the case of purulent salpingitis from gonorrhœa is adduced. Here the President expresses the earnest hope that a more serious view may impress itself upon public opinion anent the responsibility of men in this regard and he closes the subject with the following words:

"My own belief is that if fathers were as careful to inculcate lessons of chastity upon their sons as mothers upon their daughters; if that

double standard of sexual morality which prevails in society regarding the licentiousness of the young man as venial, while it brands his sister who lapses from virtue as an outcast, never to be forgiven, were forever abolished; if the true horrors, loathsomeness, and perils of prostitution were made known in a proper manner to young men—if the moral forces of good men and of good women could be combined, guided by the intelligent and zealous devotion of physicians, bearing full high advanced the White Cross, I am sure that a brighter, better day would dawn and a reign of social purity prevail. God speed the day."

On motion, a vote of thanks was tendered to the President for his most interesting and able address. Thereupon, the meeting adjourned to the Continental Hotel where a dinner was given by Dr. Parvin.

May 17th, 1893.

The morning session convened at 9.30 o'clock A. M.

The President in the Chair.

Abstract of a paper entitled:

INVERSION OF THE UTERUS WITH REPORT OF A
CASE.

DR. EDWARD P. DAVIS,

Philadelphia.

The author dwelt upon the comparative rarity of this condition, of which but twenty-three cases are recorded as a labor complication, and its grave import as a complication of labor. The case he reported was that of a young primipara whose labor was slow. This was finally ended with the forceps. Expulsion of the placenta was followed by profuse hemorrhage and complete inversion which had begun before the onset of the third stage. The attempt of the attending physician at replacement failed and when seen by the author two hours later the patient was in shock. After stimulation the author replaced, under ether, the inversion after twenty minutes hard work and the use of bi-manual manipulation, the fingers of the left hand being brought together cone-shaped and pressed against the uterus in the vagina. The uterus was then washed out with a bichloride solution and drainage secured by means of a strip of iodoform-gauze passed into the cavity. In spite of heroic efforts and the use of powerful re-agents the patient died in collapse one hour and a-half later. The pelvis was contracted and

the child's head normally developed. The author discussed the possible advantage of an earlier application of the forceps, chloroform anæsthesia, and the effect of delay in reducing the inversion in this case.

DISCUSSION.

Dr. SMITH: I have one or two questions I would like to ask but will first state the circumstances connected with three cases of inverted uterus, of which I have knowledge. One case occurred with one of my former pupils, and it occurred, in his own words, immediately after the extraction of the foetus with the forceps, while the patient was deeply under chloroform. He was horrified to see the placenta followed immediately by the uterus. He removed the placenta and tried for an hour or two to replace the uterus, but the patient rapidly collapsed and died the same day. The other case of which I have knowledge was a case of chronic inversion of the uterus, where the doctor replaced it, and I can testify to the tremendous force required to accomplish the result. In that case, first of all, he tried prolonged pressure down on the horns of the uterus without making any impression. He then opened the abdomen and used a glove-stretcher to stretch the ring and at the same time used great force in the vagina and still failed. Eventually the uterus was restored by the exercise of great traction through the abdomen on the fundus; he sewed up the uterus carefully in the abdomen but the woman died the next day. My opinion, resulting from this experience, would be in favor of getting the woman out of the shock as best you could and leave the inversion to be dealt with later, but not by the means which were employed in the second case. But I want to ask Dr. Davis this? Is it possible for a uterus by contraction to squeeze itself inside out? I cannot understand it. I can understand how it can be pushed or pulled inside out.

Dr. ALLEN: I had a case several years ago where the uterus had been inverted for four or five years, and different attempts had been made to remove it. In that case I pulled down the uterus and brought the orifice of the Fallopian tubes into view, made an incision through the posterior wall of the uterus, and passed up through that incision a Sims' uterine dilator and dilated thoroughly. Finding there were no adhesions, after sewing up the incision I had made, I then reinverted the uterus very readily. I have never had an opportunity of doing that operation since, but the ease with which the uterus was reinverted in that case and the safety of the method lead me to believe that it is one that would be useful in a good many cases where the

uterus cannot be reinverted by ordinary means. But I would not attempt that in a recent inversion. I saw a case last summer where a uterus had been inverted about a month, and in that case I found that the constriction was not sufficient to prevent a return under ordinary manipulation.

Dr. Lusk: I would refer to a case that came under my observation not long ago. I saw the patient perhaps two hours after confinement. I went to work and after some difficulty succeeded in restoring the uterus to its position, and a few days afterwards the patient died. I realized at the time that the force used does involve a great deal of bruising of the organ, and the ordinary instruction in regard to this matter is not very safe for guidance in actual practice; but I would like to add my voice in favor of the suggestion that these cases should be allowed to remain until the patient had well rallied from the shock. And later, in cases when attempts to restore the uterus are resorted to, I think it would be better to take out the entire organ than to resort to this tremendous force.

Dr. Davis: Regarding the question of Dr. Smith, I would say that when the uterus turns itself spontaneously inside out I believe an explanation of these cases is paralysis of a portion of the uterus. This must be due to a pathological condition of the uterine muscle, due in some cases to the condition of the blood-vessels and in other instances to the fact that from excessive pressure the placental sac has been weakened. The remarks made by the doctor are of exceeding interest in this connection, and illustrate the dilemma in which we are placed with regard to these cases. I was careful to avoid the exercise of force. Possibly I was justified by the apparent readiness with which the uterus went back, and at the post-mortem examination the patient was searched for any indications of injury to the genital tract. The cause of the patient's death was the condition of shock, and that I understand Dr. Lusk thinks would be avoided very largely by not attempting to immediately replace the uterus. Whether that applies where shock has continued for two hours is a question that it is very hard to determine.

Abstract of a paper entitled:

LABOR OBSTRUCTED BY OVARIAN TUMOR.

By A. F. A. KING, M. D.

Washington.

The especial interest of this paper lay in the fact that the subject had not hitherto come up for discussion before the Society and that its

narration offered an opportunity for the study of a rare and very serious complication of labor.

The author then proceeded to narrate a case in detail, of which the following presents the special features: The patient, strong, healthy and a multipara, was at her admission to the hospital, according to her statement, already in her fifth day of labor. Upon digital examination the vagina was found to be filled with a large mass, which left barely room for the insertion of two fingers between itself and the pubic bones. The anus and vulva were greatly distended. The child's head was felt entering the pelvic brim and a correct diagnosis of a face presentation was made. The tumor was so tense that its character could not be made out. This was punctured with a trocar through the rectum and a thick, flaky, white and inodorous mass was expelled during the pains. When the tumor was emptied, a dead child was born without further difficulty. The patient's recovery was uneventful. At the end of two weeks she was discharged, at which time no remains of the tumor could be discovered either through the vagina or the rectum.

One month later, she was admitted to another hospital where the author was invited to see her. She was emaciated, had fever, cough and expectoration. Abdominal examination showed a fluctuating tumor rising about two inches above the umbilicus, very tense and tender especially on the right side below. Vaginal examination presented the same condition as was observed during her labor. Tapping was advised with the possibility of a subsequent laparotomy.

The author did not again see the case but was informed that the cyst subsequently burst under manipulation and a quantity of stinking pus was expelled through the rectum. An incision was then made in the vagina behind the cervix into the tumor and a gallon of the pus was drained off. Antiseptic drainage and irrigation were practiced for three months when the abscess closed and the patient was discharged in good health.

In referring to the literature of the subject, the author quoted Playfairs' cases and the details of a case by Brewer of London.

He asked for a discussion of the three possible modes of treatment when the tumor was too large to be pushed out of the way of the descending head, viz.: abdominal section on the mother; mutilation of the child; puncture of the cyst. In small tumors, capable of being pushed out of the way of the child, he considered this a better method than that of puncture.

He also considered the best method of subsequent treatment a matter of great interest and importance.

DISCUSSION.

Dr. SEE: I agree with all the doctor says and thank him for bringing this subject before us. I have had an experience that amounts to nearly the same thing, and that is a distended Fallopian tube occupying the pelvis. I have in mind one case of that kind seen in consultation, where the delivery was completed and the thing subsequently removed after convalescence from the confinement. In case I should be called upon to treat a case of that kind and the tumor was not within easy reach, I should of course advise cœliotomy.

Dr. WILLIAMS: I think the question of treatment is of the very greatest interest, and I think an important branch of the question is the possibility of success in some cases by conservative methods in the face of apparent impossibility of effecting anything by taxis. On the 5th of February, 1888, I was asked by Dr. Lamb, of Arlington, to see a woman in labor under his charge. The patient gave a history of sharp pain in the right iliac fossa for many years. The pregnancy had shown nothing abnormal except that the abdomen at seven months was about the size of the abdomen at term. Spontaneous labor came on then. When I was called she had been thirty hours in labor and was in a condition of exhaustion. On vaginal examination I found a hard, smooth elastic mass lying between the vagina and rectum, of course filling the pelvis. There had been no change since the beginning of labor, and neither Doctor Lamb nor another gentleman whom he had called in consultation had succeeded in reaching the os. Under ether, with considerable difficulty, I succeeded in passing the finger between the tumor and the symphysis. It was possible to move the cervix freely; it apparently had no effect upon the tumor, although the tumor itself was absolutely fixed. After about an hour's taxis under ether, I succeeded in raising the tumor enough to pass two fingers between it and the symphysis. The condition of the patient not allowing any force, we decided to wait some hours. At the end of three hours of labor there had been no change whatsoever, and I prepared to incise the tumor. Putting the patient under ether, it seemed to me that there was slight mobility of the tumor, and after half an hour of steady taxis we succeeded in raising it enough to pass the hand between it and the symphysis but could not clear it from the pelvis. I was able to pass the fingers into the os and dilate it, seize the child and bring the

body down past the tumor. Having extracted the arms, I waited in preparation for a severe struggle and the great danger of rupturing the tumor in the extraction of the head. To my surprise, on putting the finger in the vagina, I found the head on the perineum and at once extracted a living child at seven months, which died within three or four days. The tumor had entirely disappeared. It was found in the abdomen and was of the size of the foetal head at term. I diagnosed ovarian cyst and recommended its removal. Two or three months later I had the pleasure of seeing it removed. It proved to be a dermoid tumor. The recovery from that operation was complete.

Abstract of a paper entitled:

MEMBRANOUS DYSMENORRHOEA.

BY T. A. REAMY, M.D.

Cincinnati, O.

Frequent and thorough curettage with the subsequent application of pure carbolic acid to the whole length of the uterine canal was the treatment advocated by the author for this disease. He gave the histories of four successful cases treated by this method. One of his cases had since become pregnant, no untoward symptoms had followed the treatment, and the patients had had no return of the disease.

DISCUSSION.

Dr. THOMAS ADDIS EMMET: I know no more about membranous dysmenorrhœa than I did twenty years ago and am no more successful in the treatment. I have found occasionally some good results by the use of the curette and by the use of the sponge-tent before we were afraid to use it. In former times anything that would produce an improvement in the condition was used, but it is simply temporary. My experience is that membranous dysmenorrhœa is simply a symptom and leads back to the beginning of menstrual life almost—the upsetting of the nervous system by over-study and everything of that kind. And sometimes with very careful attention to the improvement of the general condition of the patient we can effect more than by any other means, but I do not know of anything that I have been called upon to treat in which I have been more generally disappointed in the results.

Dr. CLEVELAND, of New York: I would add to the discussion the statement of a case which came into my hands and on whom I did two trachelorrhaphies, at an interval of ten years. She had had several

children before she first came under my care. I found her with an extensive laceration of the cervix, which I repaired. Then she passed back into the hands of her own family physician and had one child after that; this produced a laceration and I was called upon to repair it. She did not come into my hands again for several years thereafter. Then she came for the relief of membranous dysmenorrhœa. She was under my care for several months, and during that time she brought to me several specimens which were complete casts, almost, of the uterine follicles. She was etherized and I used the Sims sharp curette, curetting thoroughly the internal surface of the fundus of the uterus, and then packed it with iodoform-gauze. The gauze was left for seven days and removed. During that time she had no rise of temperature or untoward symptoms whatever. In this case the cure was absolute. She has had no return of the membranous dysmenorrhœa and is well at this time.

Dr. CUSHING: I have had one or two cases of this kind, and they have puzzled me a great deal as to the nature of them. In one case it was very important to make a diagnosis of supposed extra-uterine pregnancy, and I was astonished to find how much the sections of the membranous dysmenorrhœa resembled those of an extra-uterine pregnancy. It is not the simple thickening of the mucous membrane, of the thickening of the glands that we get in an ordinary endometritis with dysmenorrhœa. I was interested to hear of this case occurring in an unmarried woman. All the cases I have heard of have been in married women. I had almost thought that the fact that it occurred so almost exclusively in married women might tend to make one think that the function of pregnancy might have had something to do with this form of disease; in other words, that the uterus, following perhaps a miscarriage or extra-uterine pregnancy, might in some cases keep on throwing off the membrane.

Dr. REAMY: You will notice that in my paper I stated that I did not discuss the causation. There were seven or eight other cases besides these three which I reported, but not all as typical as these. I believe the disease to depend upon inflammatory conditions, and I believe itself to be inflammatory. That there are some peculiarities connected with this inflammation, that there is at each time an acute disease apparently engrafted upon the chronic disease, is probably true. The relation between the appearance of this membrane and the membrane which is discharged during ectopic gestation from the uterus is a very significant fact. I only rise to call the attention of the members

particularly to two points of my paper: first, as to the time of the curettage, that it shall be immediately preceding menstruation; that it shall be with the sharp curette; that it shall be as severe as is safe and sufficient time taken to cover the entire field; that that shall be followed then and there by the blunt curette, which will take out what has been left by the sharp curette, without the dangers which would exist if the work were done by the sharp curette. Secondly, I will ask in this connection that it be repeated immediately subsequent to the close of the menstruation—if the menstruation should occur, which it does not do in my observation. Again, that it shall be repeated prior to the next period, and then that it shall be repeated at the close of that. That is four curettements at least. It may demand more, but it demands those at least. As to the application of the solution, it should be thoroughly applied which cannot be done if you use it by injection.

Abstract of a paper entitled :

THE OPERATIVE TREATMENT OF FIBRO-MYOMATA
OF THE UTERUS.

BY HERMANN J. BOLDT, M.D.

New York.

The author calls attention to the operation of complete hysterectomy in the treatment of fibro-myomata of the uterus. The greatest credit in the advancement of this operation is due to August Martin of Berlin, who has worked out a method of operating which all are compelled to admit as ideal, viz: removal of the entire organ where the neoplasm alone cannot be enucleated. In speaking of the palliative measures the author first considers galvanism, as applied and brought to a scientific and accurate application by Apostoli and Engelmann. His experience with this did not coincide with that of many authors. In no case was the size of the tumor diminished, though in a number of instances the pain and hemorrhage were relieved. Curetting, with intra-uterine application, so as to destroy the hyperplastic mucosa, will also relieve the bleeding and pains in a certain number of cases, but it is impossible to pass the curette into the uterine cavity in all such patients, and some cases have been reported where suppuration of the tumor has followed this treatment as well as that by electricity. The ergot treatment is another therapeutic measure which has given good results in isolated instances. We have, however, a certain num-

ber of patients to whom no relief can be given except by operation, the necessity of which also depends very much upon the social position of the patient. In considering operative measures, that of oöphorectomy arises. In many cases the rapid bringing about of the menopause is sufficient, in others the tumor will continue or may even commence to grow after this period, or it may die owing to loss of vitality, or softening or suppuration may occur; besides the removal of the appendages does not stop the bleeding in all cases, notably in submucous tumors. The age of the patient, the size and consistence of the tumor, the pressure symptoms produced must guide us as to whether we are justified in merely removing the appendages, while the possible malignant degeneration of the endometrium must also be borne in mind. Of three hundred and twenty-one patients afflicted with myoma of the uterus sufficient to produce symptoms compelling them to seek advice, coming under the author's observation, only fifty-seven—14.45 per cent.—were advised operation. In a limited number of cases if the tumor is submucous and enucleable from its bed, if its size be not too large and if the portio be sufficiently dilated or dilatable to reach it, the tumor can be enucleated per vaginam. If the myomatous uterus causing severe symptoms be small enough to remove per vaginam in toto, then vaginal hysterectomy should become the operation. Pedunculated subperitoneal myomata need no discussion; after their removal a "functionating" organ is left. The same object should be sought in removing interstitial myomata. It should always be the operator's endeavor to remove the neoplasm by enucleation, which if the uterine cavity is not wounded during the operation gives a very favorable prognosis. Split the capsule, enucleate the tumor and sew up the bed with buried catgut sutures under antiseptic precautions, care should be taken to have all the bleeding stopped by the sutures, and to insure this no method is better than the continuous catgut suture used in tiers. Constricting the cervix with a rubber band while enucleating and sewing is not in the author's opinion to be favored. Another class of patients yet remains to be dealt with, namely, those in whom it is necessary to remove the tumor, plus the body of the uterus, in order to give the desired relief. For this numerous methods have been devised, but the best results of all cases operated on, from the researches of the author, have come from the extra-peritoneal treatment of the stump, the uterus having been amputated at the cervix. The author, however, considers the operations introduced by Martin of Berlin and Stimson of New York as ideal. Stimson's method differs from Martin's in that his aim

is first to ligate the uterine arteries so as to avoid using ligatures en masse. In 1888 Dr. Mary Dixon-Jones of Brooklyn performed the first complete extirpation of the uterus for myoma.

After giving the history of a number of cases operated on by him the author described his technique of the operation as follows:

"Technique of Operation.—The patient is prepared in the ordinary way with which all experienced operators are familiar—the abdomen, the vagina, external genitals, etc., as for a vaginal hysterectomy—and then the operation is commenced from below, if the case is suitable for this, by ligating the parametria as high up as possible, in the same manner as in vaginal hysterectomy for cancer,¹ except that we do not ligate far away from the cervix. The vagina is likewise detached anteriorly and posteriorly from the cervix, and the bladder detached as far as can be done without unusual exertion, the cul-de-sac of Douglas being opened first or last, whichever is most convenient. No rule can be laid down; the operator must use his judgment as to which step should be taken first. The object to be attained is to free the lower segment of the cervix, then the operation from above is materially simplified; this becomes especially apparent in cases where the pelvic floor is rigid. Now the vagina is packed with iodoform-gauze, a strip of which protrudes into the peritoneal cavity by way of the cul-de-sac.

Next the abdominal section is made in the usual way, and the rest of the uterine attachments are tied off in sections and cut. To avoid injury of the bladder, the viscus, just prior to its detachment above, especially if it is spread over the tumor itself, should be partly distended with a mild boric acid solution to show such attachments, then about half an inch above the attachment, whether it is only at the utero-vesical fold or to the tumor, an incision is made and the remainder of the bladder is separated.

After excision of the myomatous uterus the vagina and floor of the pelvis are *closed*; all that can be seen from above is the continuous catgut suture with which the pelvic peritoneum has been closed, and a few small pedicles from the upper parts of the broad ligaments, the adnexa, it is self-understood, having been ligated off at the beginning of the abdominal work, or as soon as was practicable. The abdominal wound can now be closed."

This procedure is not indicated, however, in cases of large tumors which draw up the cervix and vagina. Here the hysterectomy may be begun from above and Douglas' pouch opened from the abdomen. If

¹ See AMERICAN JOURNAL OF OBSTETRICS, October, 1892.

difficulty be experienced in entering the peritoneal cavity after separation of the cervix from its vaginal attachments, the operator can leave that part until he has tied off the uterus by *coeliotomy*. But when the floor of the pelvis is rigid, an accompaniment especially of tumors which crowd down into the pelvis, the method of the author is especially applicable. He avoids the use of clamps and ligatures in connection with an open wound.

The following rule is offered as the indication for this technique :

"If the tumor be of small size (not larger than a new-born infant's head), crowding down into the true pelvis; or if there be an intraligamentous tumor; if the *portio vaginalis*, in consequence of such crowding from above, be low in the vagina, so that it is easily palpated, we have reason to believe that the pelvic floor is rigid; and if the vagina be sufficiently spacious to work in, the operation can be done as indicated with greater advantage."

During convalescence the patient has a profuse and offensive discharge *per vaginam* while the stumps are sloughing, and in addition to vaginal douches the use of the occlusion pad is advised.

The author prefers supra-pubic hysterectomy to the method described in cases of extreme *anæmia* or depression, because the former operation can be more rapidly performed. Yet under ordinary circumstances he prefers his method because of the long convalescence and the risk of hernia at the lower angle of the wound incident to the supra-pubic method. The especial objection to the former is the greater length of time required, though the author believes this might be much shortened. He quotes Martin, of Berlin, as having done it in nineteen minutes in one case. The objection that the pelvic floor is too much weakened by the complete operation is practically nil, because in vaginal hysterectomies this has not generally been found to be the case.

The author rebuts the objection of Dr. Baer and others to total extirpation because of the necessity for drainage. He denies that drainage is necessary where proper aseptic precautions have been adopted and states that he has lately abandoned it both here and in hysterectomy for cancer. Only catgut is used throughout the operation, except in the abdominal wound.

In reviewing the chief causes of death either by the intra- or the extra-peritoneal treatment of the stump the most prominent is found to be *septicæmia*. This cause is apt to be eliminated by complete hysterectomy with thorough technique. In the intra-peritoneal treat-

ment secondary hemorrhage is an important factor in mortality. This can be eliminated by proper adjustment of the ligatures in complete hysterectomy. In this later method of operating the chief cause of death lies in shock or extreme anæmia.

He would not altogether give up the extra peritoneal treatment.

DISCUSSION.

Dr. BAER: I believe that where a fibroid tumor is diagnosed, even if it is only the size of one's fist and there is no contra-indication, and the patient understanding fully all the conditions desires the operation, that it ought to be removed just as an ovarian tumor of that size would be removed under the same conditions. If there were other nodules discovered I think the operation should be finished at once by a supra vaginal hysterectomy. I believe that is the operation which will be adopted by all of those who are performing total extirpation. I have not had in all my cases the slightest sign of sepsis. The operation is clean, smooth and quickly done.

Abstract of a paper entitled:

TECHNIQUE OF PRIMARY CÆLIOTOMY IN ADVANCED ECTOPIC GESTATION.¹

By WM. R. LUSK, M. D.,
New York.

Dr. COE presented a specimen of

INTERNAL MIGRATION OF THE OVUM.

This is a specimen of double ectopic gestation in the same tube. The patient had symptoms of ectopic gestation twelve years before. She then had the symptoms of ruptured ectopic gestation about three or four months before I saw her. I operated and found the following conditions: at the right of the uterus, behind the right broad ligament, was a ruptured sac containing a mummified foetus. Below that I found a pint of fluid blood. With that came a four-months foetus which was alive. I took it off on my hand and it lived for a couple of minutes. Attached to this sac was the present sac of about four months. It is a very unusual specimen and I have made a careful search of the literature and have not found any like it. The question was—what was the cause of the second impregnation, whether external or internal crossing of the ovum—in other words, whether the impregnated ovum was derived from the opposite ovary or whether it entered the uterus and from there into the tube in which the impregnation occurred.

¹ For original article see July issue of JOURNAL.

Dr. WILLIAMS: I had the pleasure of examining the specimen for Dr. Coe and it reveals several very interesting conditions: (illustrates on blackboard). The internal migration of the ovum is much the more frequent form. The question of migration of the ovum is one of extreme interest and has been best proved by experiments upon animals. I believe the ovum is wafted across by some current.

Dr. JOHNSTONE, of Cincinnati: I would like to take up where Dr. Williams left off. His closing sentence is "wafted across by some current." This I do not believe, for I caught one of these tubes going through an acrobatic performance. I found an ovary, with the tube doubled up behind the uterus: (illustrates on board). I believe the tube reached across to catch the opposite ovary. In this case there had been repeated attacks of pelvic inflammation. Each successive attack had thrown fresh hands upon it, until at last it was caught and held firmly, reaching quite across to the opposite side. I believe it is not a crossing of the ovum but a crossing of the tube; that it is a provision of nature to compensate when one tube is hampered, so that the other tube can reach over behind the uterus and catch the ovum as it comes out. In the case I refer to the tube on the left side was fastened firmly; and the other one was attached by adhesions, holding it right down in the neighborhood of the opposite tube and they were very soft, showing that it must have been fastened there a short time before I saw it.

Dr. WATHEN: I am certainly interested in the statements of Dr. Johnstone, but I fail to agree with him in his conclusions. It is impossible for a normal tube, four inches long and brought out straight, to get around by any means across a uterus two inches wide and an ovary on the other side, making two and a half to three inches. There must have been some disease of the pelvic structures to bring this tube around at all in that direction. What he has described is a very common condition met with in that part. We all know that ovaries that become obstructed are constantly twisted around behind the womb. There is no reason why the pathological conditions here should not have produced exactly the conditions that he believes were physiological. In regard to the primary operation for ectopic pregnancy, I have had no experience with these operations at or near term, but I removed some three years ago a specimen that had advanced nearly as far as the one that Dr. Lusk has presented. In this instance there was but little hemorrhage.

Dr. WILLIAMS: The statement Dr. Johnstone made about the

tube reaching over is a very old one, first broached about fifty years ago, and has since then been discarded by most observers on the subject. The experimental work I have spoken of disproves it, aside from the fact that he attributes an amount of instinct to the tube with which I should hardly credit it.

Dr. MANN: I operated on a case for ruptured tubal pregnancy, operating soon after the rupture, and found an interstitial pregnancy, that is, the horn of the uterus had ruptured but there was a pregnancy in the opposite ovary.

Abstract of a paper entitled:

HYSTERO-EPILEPSY, A REPORT OF SEVEN CASES
CURED BY SURGICAL MEASURES.

By H. MARION SIMS, M. D.,

New York.

The author has cured two of his patients of this manifestation who suffered from acute antelexion, by performing posterior section on the cervix and introducing a glass stem. In this he followed Grailey Hewitt's suggestion that in cases of acute antelexion, hystero-epilepsy was caused by pressure upon the nerve filaments. In the other five cases reported he had resorted to Tait's operation on the appendages and had cured the symptom. An interval of several years had intervened since he had operated upon these cases without any return of the disease. He had used nitrate of amyl but only with the result of temporary relief.

DISCUSSION.

Dr. GORDON: In 1886 I was Chairman of the Section on Obstetrics and Diseases of Women at the American Medical Association. At that time the chairman was to deliver an address, and the title of my address was "Hysteria; Its Relation to Diseases of the Uterine Appendages." In that address I gave my reasons for believing that neurosis so common in this class of cases was not due to the uterus but to the appendages. I there cited case after case, similar to what Dr. Sims has now given. I elaborated those cases considerably and have had an opportunity to follow them up since. Now, the prominent thing in all that class of cases where the hystero-epilepsy was marked, where the convulsions were very severe, was one of two conditions and sometimes both conditions combined. It was a prolapsed ovary which showed well marked signs of repeated attacks of inflammation, or a cirrhotic ovary destroyed absolutely by inflammation, and that class of

small cysts with a dense, hard covering to the ovary. It seems to me that this is the class of cases where we find the worst form of neurotic condition. I believe that nine times out of ten, with the nervous symptoms in a simple case I can make a diagnosis of the almost exact condition in which I will find that ovary, without operation. The tunic, the covering, of that ovary is hard, is dense, so much so that in many instances if you make a section of it the edge will turn up promptly and will be sharp enough for you almost to cut your finger on it. I have had an opportunity to observe all those cases that I operated on since—the operations began in 1883—and I do not mean to say that every case has absolutely gotten well, but all of the prominent symptoms were relieved in every prominent case, and they have gone on from being much better to being absolutely well. I believe that an immense work in time to come can be done in that direction and I hope it will be.

Dr. REAMY: I hope just the opposite from the prayer of my friend who has just taken his seat, and that is that an immense work will not be done in that direction until it is the experience of other men that the majority of these cases are cured by this operation. My personal observation in this field has been somewhat extensive, both as to the results of my own work and that of others, and in a majority of cases the convulsions go on, the disease goes forward, and in two cases that I know of the patients became insane. I believe the truth of the cases reported by the author of the paper, but I simply want to say that from the fact of this paper being read and the speech of my friend being reported all through this country there will be danger of a clamor for ovaries to be removed, and the cases will not be cured. That some of these cases are cured there can be no question. That they have been cured there is no doubt. But I repeat the statement that it is extraordinary that seven consecutive cases without a failure should have been cured. I have known of no such result anywhere else. As to the ability of my friend on the right (Dr. Gordon) to diagnose the condition of the ovary by the nervous symptoms, I do not question the diagnosis, but it is a shrewdness in diagnosis not possessed by any mortal on this earth except the distinguished gentleman himself.

Dr. FORD: At the time I performed my first operation for this condition, I knew more about nervous diseases than gynecology. I had just left a long service in an asylum, and the question had just come up as to the removal of the appendages in these cases. I was very ambitious to cure epilepsy and I had a few good cases. None of them

died, but they didn't get well of their epilepsy either. The attacks were either absent or lessened for a while, and then they returned, and in three years the full tide of epilepsy was re-established. A good many of these cases reported as hystero-epilepsy are really hysteria and ought not to have the name of epilepsy. They undoubtedly do recover from the removal of the ovaries, and they undoubtedly do recover from various other causes without the removal of the ovaries. It has been my experience in the asylum to see women recover from these symptoms of insanity with both tubes enlarged, and it was our rule not to operate on a woman when she was in condition of insanity, which I think was good medicine. I have seen these women recover by the dozen with the ovaries still full of pus and sometimes with the vagina full of material which they had put in from time to time in their insane condition. So that I know that recoveries can take place without the removal of the appendages in cases of insanity. But if the organic disease of the brain is established enough to produce insanity, the removal of any part of the body does not cure it. I do not believe in this operation.

Dr. NOBLE: I have had three cases of the removal of the uterine appendages for hystero-epilepsy, and I can report that they are all three cured, at the end of one, two and three years. I do not feel at all like Dr. Reamy that there is any danger of a revival in the removal of diseased ovaries, whether it be for hystero-epilepsy or not. If the ovaries are incurably diseased, or if the tubes are incurably diseased and are making the patient an invalid, whether she has hystero-epilepsy or not, I think it is desirable that the present plan of removal of such diseased structures be continued. I wish to report these three cases: The first case was one which was operated on by Dr. Kelly, and after that operation her convulsions were about one-tenth as frequent as before. She subsequently became my patient, developed a tumor upon the opposite side, which I removed, and since the last operation she has not had a convulsion. She was a single girl, about nineteen when operated on the last time. The second case was a married woman who had had a child and who had violent hystero-epilepsy with each menstrual period. Her ovaries were large and full of cysts. Since her operation she has been well and has had no convulsions. The third case was operated on about a year ago, a young girl sixteen or seventeen, and she came under my care for hystero-epilepsy. I treated her faithfully and feeling that one should not be in a hurry in removing these ovaries where hystero-epilepsy is the principal trouble, I referred her

to Dr. S. Weir Mitchell and she was in his hospital here for the greater part of a year and came out not only worse with the hystero-epilepsy, but in the meantime the disease of the appendages had so advanced that it was necessary to remove them. She had pyosalpinx and an ovarian tumor. Since her operation she also has had no convulsions and at this time is a trained nurse.

Dr. BOLDT: While some cases are cured, I do not believe that true epilepsy is ever cured by the removal. The rule which may be sanctioned is that the appendages may be removed if the disease is clearly demonstrable and if the condition can be relieved by no other means. It should be left to the patient also whether she wants to undergo such treatment as the radical operation which has been advocated by some, and it must be made clear to her that it is by no means the rule that these cases are cured, but that a great number of them are left in a worse condition. So that unless the condition points directly to the diseased appendages, unless all other treatment has failed, and unless the patient fully sanctions it and takes the chances herself, the operation certainly should not be done.

Dr. A. PALMER DUDLEY: Some time ago I was asked to take part in a discussion on this subject at Albany, and I occupied considerable time in getting together statistics. I collected 105 cases and I am free to say that the conclusions resulted in unfavorable statistics. More than a majority of the gentlemen reported that their cases were unsuccessful; that the patients were relieved for a time, but that the attacks recurred. In most of the cases the operations that were done were made for diseased tubes and ovaries where a diagnosis had previously been made of such a condition. I believe that the secret in the diagnosis, and in fact in the treatment, rests in the ability to discriminate between the predominating elements—the epilepsy or the hysteria; than the ability to diagnose the disease sufficiently to warrant an exploratory incision. If a surgeon makes the exploratory incision and finds the ovary or tube so damaged that it is useless, he is justified in removing it in the hope of curing the case, but he cannot say then that the condition does arise from the uterus or that it will not continue. I myself am not in favor of it unless, as I say, we can clearly make out disease of the uterus.

Dr. JOHNSTONE, of Cincinnati: They talk of hystero-epilepsy, but I do not believe in it. These cases are the result of pain, menstrual pain or inter-menstrual pain. An inter-menstrual pain simply means an adhesion. A pain means a tension, whether it is an adhesion put

on a stretch or the bending of a hard capsule of the ovary. I had a case in which this condition of driving, agonizing pain in the ovary would come on and run on for twelve to twenty-four or thirty-six hours, and at the end of thirty-six hours she would go into convulsions, from nothing on the face of the earth but pain. I felt that these ovaries were put on the stretch by the anæmic condition. It was not hystero-epilepsy, because I do not believe there is such a thing. But that is what it was called.

Dr. GORDON: I will say that I do not believe in operating for epilepsy. That is another condition entirely, which ought to be left out of this discussion.

Dr. SIMS: I am glad to have heard of the good results of Dr. Gordon in this. Dr. Reamy objects for fear there will be a clamor for the operation for the removal of tubes and ovaries. I do not think we could have much more of a clamor than we have. I have only given you the five cases which I have cured. That does not represent, as I say in the paper, the sum-total of all the cases I have treated. The diagnosis was distinctly made out before the operation was done and the circumstances clearly explained to the family and the patient. I agree that epilepsy should be left out of this discussion, as it is not epilepsy in the proper sense, but what the writers call hystero-epilepsy and induced by the severe pain and diseased condition of the tubes and ovaries.

Adjourned.

May 17th, 1893.

Afternoon Session convened at 1 P. M.

Abstract of a paper entitled:

ÆTIOLOGY OF DERMoids OF THE OVARY AND
TESTICLE.

By ARTHUR W. JOHNSTONE, M. D.,

Cincinnati, O.

The first systematic attempt to locate the part of the ovary from which dermoids spring is found in Bland Sutton's papers, published in the British Gynæcological Journal for August, 1888. He proves conclusively that dermoids are never found in any part of the ovary except that portion which contains Graafian follicles and that dermoids spring from these follicles. The Graafian follicles arise, as

all know, in the dome of the ovary, the portion in which necessarily the ova are formed. The hilum of the ovary contains the remnants of the Wolffian body which to all intents and purposes is degenerated kidney tissue. The parovarium, Kobelt's tubes and Gärtner's duct, are nothing but the ducts of this Wolffian body which have undergone more or less degeneration. They bear the same relation to this organ that the hilum and ureter do to the kidney. It will probably be also *proved* that dermoids of the testicle never arise in any part except the semen producing portion. Mr. Sutton having proved that dermoids never arise anywhere but in the Graafian follicles, we then have to deal with only two organs, *i. e.*, the Graafian follicle wall itself and the ovum. Mr. Sutton thinks, however, that the fibrous tissue strictures which are formed in these tumors originate in the stroma of the ovary and are not a part of the new growth. In this he is mistaken, for we have every tissue in the adult duplicated in dermoids. We not only have the epiblast, as has always been taught, but a mesoblast and hypoblast as well.

He has shown conclusively that the common ovarian tumor is little less than a dropsy of the Graafian follicle; also that certain multilocular cysts, containing each one little patch of skin, could properly be classed as dermoids; this he uses as an argument to show that the two shade into each other. In his conclusion he is probably mistaken, for the one little patch of skin represents the original site of the ovum which had never been set free from the wall of the Graafian follicle and got its developmental start which could result in no higher grade of growth than a small patch of dermal structure. The fact that in these tumors some of the sacs are simply ordinary dropsies of the Graafian follicle, while others are dermoids, shows nothing but that, in the disease which started the ovarian structure to growing, the ovum in some of the follicles was destroyed, leaving nothing to show for its site of growth; in others it was set going and the dermoid was the result. The theories which have heretofore been proposed for the production of dermoids of the ovary are totally inadequate; while it is true we have to look to embryology for their cause, yet it is not in the embryonic state of the mother herself but that of her individual ova that we will find the true solution. Dermoids of the orbit or other facial cavities, as well as those of the median raphæ and mediastinum, are undoubtedly due to the doubling in of the little islands of the epiblast as has heretofore been taught. They are undoubtedly caused by some pathological condition in the foetal state of the individual. But, when it comes to

the ovary and testicle, we have a totally different state of things. The Wolffian body springs directly from the epiblast. After several months existence, the kidneys spring from one side of it and the ovary or testicle from the other, thus leaving the life history of an organ interposed between the epiblast and the beginning of the permanent genito-urinary structures. We might naturally expect dermoids of the kidney to be equally as common as in the ovary and testicle, if they were produced by this doubling in of the maternal epiblast, where, the fact is, they are almost unknown. But a still stronger proof is that a dermoid of the Wolffian body has never yet been reported. Remnants of the Wolffian body are found in the hilum of the ovary and testicle in the adult state, and Sutton has proved conclusively that dermoids of the ovary never occur in any part of it except in the Graafian follicle portion which is the ovary proper. So it would be very improbable to think that the maternal epiblast is responsible for the dermoids of either ovary or testicle, after it has passed through all the transitions necessary to the formation and functional activity of the Wolffian body and then given origin to the kidney, the ovary or the testicle. If this were the case we would naturally expect dermoids of the kidney to be equally common with those of the ovary and testicle, whereas they are almost unheard of. The following history of a specimen found last spring shows that dermoids contain not only epiblastic but hypoblastic and mesoblastic structure also; in other words every tissue of human body is represented in its formation. The specimen consisted of the inside of a heart almost perfectly formed. It had a mitral valve, columnæ carneæ, chordæ tendinæ, lined with a perfect endocardium, and had all the muscular structure necessary to the formation of a heart, except that they were incorporated in the wall of a cyst. The semi-cartilagenous ring that separates the ventricle and auricle was plainly marked, and there was quite a good attempt at the formation of the auricle as well as that of the ventricle. In another specimen found about the same time there was a bicuspid tooth, the usual long elf lock of hair, and alongside the tooth was half the tongue fairly well formed and covered with the proper kind of papillæ. The organs in these specimens were so well arranged that it could not have been by chance, it could only have been by a weak effort to follow out the general laws necessary to the development of a human being. The ovum, to the point of its separation from the wall of the Graafian follicle, is not only a protozoön in appearance but in reality. It contains both elements, male and female and, like the tapeworm and other higher grades of protozoa, it

has the power of auto-impregnation. At the time it separates from the wall of the Graafian follicle it extrudes two globules, which are known to be one of the polar cells. In the epithelial cells in the testicle after they have split up into the spermatozoa, each one of their elements, just before the spermatozoön is perfectly formed, looses a small lump of protoplasm called the spermatie granule. This marks the point of separation between the protozoa and higher grade of animal life. The failure of either the ovum or spermatozoön to leave the bi-sexual condition is probably the point from which dermoids of the ovary and testicle spring. As the failure of a physiological function is sure to be followed by a pathological condition, so the pathological specimen is the result of some physiological error.

The conclusions arrived at are : That embryology is the proper field in which to study dermoids; that they arise from the ovum or spermatozoön and not from any malformation of the epiblast from which the patient sprang; that their production was due to some definite physiological law which had gone amiss; that no practical use has yet been made of the long known fact that up to a certain point we are all protozoa, just as in a later stage we become amphibians and such like; that it is in a study of this protozoic age that we must expect to find the seeds which result in the formation of the dermoids; that the failure to pass from one stage of animal life to the next highest is sure to leave its imprint in the shape of a pathological condition.

DISCUSSION.

Dr. GARRIGUES, of New York : There was one thing that struck me, namely, the importance of the fact that the dermoid cyst only develops where there are follicles. That is in harmony with what we know of the two other kinds of cyst. The original view of ovarian cysts seems to be the true one. I was much interested in hearing that the Doctor had found a well-formed heart. I have seen quite a number of the organs mentioned as having been found, but the heart was not among them, though there were others just as complicated, as, for instance, a breast with the nipple. There is a theory which I think is not quite exploded yet, that when we have such developed organs as a heart or a breast or an eye that we have to do not with one individual but with two individuals. We see it on a larger scale in the case of a man on exhibition now in New York with a small child coming from his belly.

Dr. SKENE : It occurs to me that this is in accord with many other curious things which can be traced to an arrest of evolution with a

continuation of growth. That must have been the right theory, because it is so in accord with the curious pathological products. I am exceedingly well impressed with the paper.

Dr. H. C. COE: I think this is an extremely suggestive paper. I have never been able to understand the commonly accepted theory of dermoid cysts, that is, that they were due to an arrested development in the maternal part, because I never could understand why a sudden impetus should be given to the development of those foetal parts, apparently sometimes at maturity. I think this theory of Dr. Johnstone's is borne out by compound dermoid cysts, and that it is an exceedingly probable one.

Dr. BYER, of New York: Ever since seeing my first dermoid cyst I have become convinced that it was due to an attempt at the reproduction of species. I did not arrive at it the way the Doctor has, but by following back a very well-known histological and pathological law, that is, that the off-spring of a tissue invariably resembles the parent. A cancer transferred from one part of the body to another will take on in its new home the type of its original source.

Abstract of a paper entitled:

THE OPERATIVE TREATMENT OF PROLAPSUS
UTERI ET VAGINÆ.

BY GEORGE M. EDEBOHLS, M. D.

New York.

The author believed it to be often difficult to decide the extent to which plastic operations should be carried upon the vaginal tissue in this condition, whose operative indications varied with the age of the patient and whether the functional life of the sexual organs was present or past. The indications in operating previous to the menopause are to restore the parts to the normal functional condition; after the menopause the convenience and ease of the patient are to be chiefly considered. The operations indicated are curettage and anterior and posterior colporrhaphy, though lateral colporrhaphy he had found useful in certain cases. He practiced amputation of the cervix in addition in marked hypertrophy of the uterus and also added Alexander's operation as an adjuvant. He believed the indication for ventro-fixation or hysterectomy in this condition very rare.

Dr. EDEBOHLS asked that remarks be limited to the discussion of the necessity of uniting plastic operations with ventro fixation.

DISCUSSION.

Dr. EMMET : The subject covers an immense field. To begin with I should say to cure a case of acute procidentia the most important thing is to make a diagnosis as to the cause. Frequently we are not able to do that. I have seen very few cases of procidentia that could not be relieved by plastic surgery. Of course there are exceptions to every rule. Many men have tried to get good results in procidentia by endeavoring to get support from the anterior wall. No operation has ever been devised on the anterior wall which can give any support to the uterus, unless it be one that I have recently adopted to try and relieve a certain class of cases becoming now quite numerous, where the appendages have been removed and in consequence of tying the ligature too low in the broad ligament the uterus is forced down on the floor of the pelvis. The condition here is that which exists after a woman has become old and the vagina shortened. I have thought in some of these cases that I have relieved them, but it is too soon yet to be certain. If we take a portion of the anterior wall and carry it far back into the cul-de-sac so as to leave an opening for the uterus, we seem to bring into play a lifting power that will lift the uterus up off the floor of the pelvis; thereby we give proper support to the blood-vessels, because, after all, that is the condition from which the woman generally suffers in prolapsus. It is not due to the prolapsus itself but to the want of proper support of the blood-vessels. There is a condition that sometimes accompanies instrumental delivery which I have found to be incurable; it seems as if there were a separation between the rectum and the vagina so that all the pelvic organs come down in a mass, and I have had several cases in my life where I have failed to lift the uterus and thereby relieve the patient; but I have never yet failed to keep the uterus within the vagina. Whatever operation we do, we can give no support to the uterus unless through the posterior wall. As I say, we can do no operation upon the anterior wall that will ever give any support or elevate the uterus. Most cases of procidentia which I have met with in women who have borne children have been due to laceration of the cervix, even though it has come on after the menopause and when all appearance of laceration has disappeared. The laceration of the cervix was the original cause. In such cases if we take a piece out and treat the lesion as a laceration we reduce the size of the uterus. In these cases involution will take place within the vagina and the cul-de-sac will disappear. If we set up counter-irritation elsewhere we bring about a new condition of things in the vagina.

I can honestly say that I have seen very few cases of prolapsus in my life that I could not relieve by plastic surgery. I have failed several times. I have taken the trouble to follow cases ten years and more, at the time when I was at the head of the Woman's Hospital, when the women came back if they were not cured, and if they were cured they came back through gratitude. In this way I had an experience which no other man ever had or can have again, in being able to follow those patients. To-day, if you succeed on a case she simply thinks you have done no more than you ought to do. If you fail you never hear of her again. Therefore, I may honestly say that I have seen very few cases in my life of prolapsus of the uterus that I could not relieve by plastic surgery. I have in a few cases opened the abdomen and fixed the uterus to the abdominal wall. I have succeeded in some cases; in others I have failed entirely, because there is great difficulty in being able to get the uterus lifted to just the point where the blood-vessels are given the proper support; because if you pull the uterus up too far you will have the same pain and symptoms as in the uterus prolapsed.

Dr. E. C. DUDLEY, of Chicago: Like Dr. Emmet I have seldom seen a case of complete procidentia where it would not be satisfactory to do a plastic operation—the only exceptions being those in which the uterus has a tumor or in which there is something forcing the uterus down.

Dr. POLK: I am in an unfortunate position in finding myself somewhat in opposition to the distinguished gentlemen who have preceded me, because it has been my misfortune to meet with certain cases, chiefly among the working-classes, that I could not relieve by the plastic operation. I take it for granted that in this discussion the matter of the personal equation surrounding any individual operative procedure is aside the issue, because if it be not we all must admit at once that Dr. Emmet can do in plastic work that which none other in this Society can hope to reach. Therefore we accept the doctor's statement that he himself can in every instance cure.

Dr. EMMET: I did not say so; I made the exceptions.

Dr. POLK: Then accepting the doctor's statement that there are exceptions, those exceptions happen to fall within my line of work, and I presume it is to those exceptions that the operations to which Dr. Edebohls alludes will apply. They are cases, sir, in which, as the doctor has said, the entire uterus and vagina are outside, cases in working-women, cases, in other words, in which the plastic operation would to my mind fail. In looking at this subject I confess that I

view it wholly as a question of hernia, and that the principles which prevail in the treatment of other hernias should be brought to bear here, as far as surgical procedure will permit. Of course the nearer the woman is to the menopause, the nearer to the time when the uterus is going to cease to be of use, the more urgent the method of procedure we speak of. We have an organ which by means of its position tends always to exclude itself, no matter how carefully the work is done. Now, the operation in question is nothing more than the removal of the organ and the attachment of the slack of the vagina to the anterior abdominal wall. Originally these cases no doubt would have been quite as well treated by hysteropexia, as Dr. Edebohl has said, but I have discovered that where there is this extreme prolapsus the attaching of the fundus did not sufficiently take up the flap and in drawing out the uterus I cut off as much of it as was necessary in order to take up the flap, and that has led ultimately to the removal of the organ and the attachment of the vagina. But there are certain cases in which it appears to me that the attachment of the vagina even cannot be made, and in which the amount of slack is such that hysteropexia will not avail you; in these cases my habit has been to transfer the support of the uterus to the vagina. It is a procedure which is quickly done; no danger attaches to it, and in the cases in which I have tried it it has given me good results. The exact manner of putting this procedure into execution I will not take up your time in describing. I confess, however, that I believe the plastic operation should always be done no matter what other operation may have been undertaken; because the essential point is protrusion through the opening, which has been so enlarged as to invite a subsequent protrusion, even though you remove that organ which is the chief offender in the prolapsus. Therefore the same rule, it seems to me, should be applied here as in umbilical hernia, or in inguinal hernia, namely, to restore the opening as nearly as surgical technique will permit.

Dr. KRUG, of New York: Procidentia acutis of the vagina is a disease not usually met with in private practice. I have never met a case in private practice, but it is a complication which we see in hospital work amongst the hard-working women. In spite of what has been said here, I have been disappointed by plastic surgery in some of my earlier cases, and I have had to operate by more rapid surgical procedures on cases that had been already subjected to plastic operations of the pelvic floor several times, and in the hands of gentlemen whose names are very familiar to everyone here. I am on the con-

servative side in dealing with acute prolapsus of the uterus. In fact, amongst the large number of cases that I have had to deal with in my hospital practice, there is only one single case where I have had to make total extirpation of the uterus for complete procidentia, and that was in a young woman of thirty-two years of age who had borne twelve children, and where the abdominal walls were so flabby that they could be pulled out a foot and half from where they normally hang. There I did a vaginal hysterectomy. I have never done an abdominal hysterectomy for complete procidentia, but I have taken exactly the same steps that Dr. Edebohls has recommended, *i. e.*, reduce the size of the uterus as much as possible by curettage.

Dr. EMMET: I would like to explain that I did not mean to say that plastic surgery for procidentia should be confined entirely to the posterior wall. On the anterior wall it is equally as essential, but for an entirely different purpose. Both are equally necessary, and you cannot succeed by either operation alone.

Dr. BOLDT: It seems to me that very much will depend in doing these operations on what is the condition of the uterus. If we have a uterus in an old woman which has undergone senile atrophy I do not see that it is going to be very important to remove that organ entirely. In those cases we have an enormous elongation of the cervix. The reason why the plastic operation in very many of these instances fails is because the atrophy of the connective tissue has gone on to such a degree that the mucous membrane is entirely separated from the underlying structure. In the class of cases where the uterus itself is very much enlarged, and where the woman has not gotten to that stage where senile atrophy has taken place, we must either, in the judgment of the operator, do ventro-fixation of the uterus or a total extirpation. I have also obtained excellent results in the shortening of the round ligaments.

Dr. DUDLEY, of Chicago: I do not think the discussion on this subject should close without taking cognizance of the fact that there are two classes of plastic operations done for the cure of complete procidentia—one of which is useless and the other very effective. (Illustrates on blackboard.) We have here a representation of the uterus and the vagina. The long axis of the uterus and the vagina being in the same line, one class of operations simply has for its object the fixing of the vagina in such a way that the uterus finds it difficult to get out. If the axes of the uterus and vagina remain in the same line it is

only a question of time when that uterus will find its way out. The other class of operations, of which there are only a few, has for its object a change in the angle between the long axis of the vagina and the long axis of the uterus, so as to make those two axes form an acute angle with each other. The object of that operation is to force the cervix up into the hollow of the sacrum. That is the object of one part of the plastic procedure. The object of the other part of the procedure is to force the lower extremity of the vagina up against the pubes so that the long axis of the vagina will form an acute angle with the axis of the uterus. The uterus cannot get out because it is unable to turn such a sharp corner, the angle being acute. All operations belonging to this class, which have for their object a change in the direction of the vagina from the abnormal vertical direction to the normal oblique and a consequent change in the axis of the vagina and the axis of the uterus so as to make those two axes form an acute angle—all operations of this class will succeed in complete procidentia, unless the uterus is for some reason too heavy, in consequence of a tumor or some other disease which tends to force the uterus down.

Dr. A. LAPTORN SMITH, of Montreal: I wish to add my testimony to the value of the operations recommended by Dr. Edebohls. I think it is very important to leave the silk-worm sutures in at least one month.

Dr. NOBLE: The question of operations for procidentia is one in which I am very much interested. I have appreciated very much Dr. Edebohls' paper and also particularly the discussion of Dr. Emmet and Dr. Dudley. I think it is somewhat marked that those who follow most strictly in the lines laid down by Dr. Emmet have the most confidence in the value of plastic work. I can bear my testimony to the permanent value of plastic work in procidentia. In my hands complete procidentia is very much rarer than partial procidentia, that is, cases in which the entire vagina and entire uterus have been outside the body are comparatively infrequent. But the cases in which the cervix protrudes from the vagina are, in the hands of any one having a large hospital practice, exceedingly common. Including these cases I may say that, having operated on very many of these, I know of but one case in which the complete procidentia returned. The plan of procedure which I have adopted is to amputate the cervix at as high a point as can be done without opening the peritoneal cavity. In all these cases the uterus will measure four to five inches because of the elongation of the cervix. It is a very easy matter to stitch the vagina

to the cervical stump and shorten the uterus so much that by the time the patient is out of bed it measures perhaps not more than three inches, provided, of course, she has not a tumor. The operation upon the anterior wall is simply for its temporary and not for its permanent effect, and I complete the procedure by doing the very extensive operation on the lines laid down by Dr. Emmet, that is, doing the work so as to utilize the action of the muscles in holding up the vagina. In my hands the results have been eminently satisfactory. There has been but one complete failure. I agree, however, with Dr. Edebohls that in some cases it would be desirable, particularly in these hard-working women, instead of counseling them to keep off their feet for a great many months, to do the ventrofixation.

Dr. CHADWICK: It does not seem to me that the weight of the uterus is the chief factor in procidentia. It is, according to my idea, a factor which exists in every case of hernia—umbilical, inguinal and vaginal—an increased tension with a loss of resistance to that tension at the aperture. I say that it is unsurgical and unscientific to talk of cutting away what has come out of the hole. I say close the hole. The factor is an abdominal pelvic tension disproportionate to the resistance at the outlet. I think Dr. Dudley's idea was correct—stop the outlet. (Illustrates on board.) When you get the uterus down outside of the body you invariably get Douglas' pouch there too. That is also a factor. And another factor which is not borne in mind is the retentive power of the abdomen. You must bear in mind that the abdominal pelvic cavity is a close cavity; you cannot have anything come out without something coming in to take its place.

Dr. EDEBOHLS: My object in presenting this paper was to elicit a discussion as to the operative treatment of these cases of complete prolapsus. I especially limited it to complete prolapsus because I thought if we could relieve these cases by operation we could surely succeed in the cases of incomplete prolapsus. Now, while I agree perfectly with many of the speakers who have spoken, that by plastic work alone a prolapsus can be cured without ventrofixation, I will say that it can be thus cured in nearly every case if the plastic work is extensive enough. But what does that imply? It implies that you close the vagina to such an extent that it no longer answers the purpose of a vagina, and except in very old women who have no husbands that is a great objection. In the next place, I wish to answer at once a point that Dr. Dudley and Dr. Chadwick have brought out, and that is, that to prevent the uterus from forcing its way down again you must put the axis of the uterus

at an angle to the axis of the vagina. That is what ventrofixation does in all these cases; by bringing the fundus squarely forward against the anterior abdominal wall, it throws the axis of the uterus at an angle to the axis of the vagina. I agree with Dr. Lapthorn Smith that as long as you keep the uterus up against the abdominal wall it cannot prolapse, and a good method of doing it is to use the permanent buried silkworm suture, which will constantly keep the uterus in place. In regard to Dr. Polk's objection, in some cases to plastic operations done with ventrofixation for cure of prolapsus—that in many cases there is too much slack of the vagina to be taken in without drawing it up and fixing it to the abdominal wall—I claim that by ventrofixating the uterus you have the means at your command to take in as much or as little slack of the vagina as you please. If you have a long vagina you simply ventrofixate further up on the abdominal wall.

Abstract of a paper entitled:

THE PATHOLOGY AND TREATMENT OF INJURIES OF THE PELVIC FLOOR.

BY ALEXANDER J. C. SKENE, M. D.,

Brooklyn.

The subject divides itself into two classes of cases: (1.) Injuries in the median line below the floor of the pelvis. (2.) Those which are transverse upon the pelvic floor. To the anatomy of the pelvic floor the principle of the suspension bridge applies. When the injury is in the median line, the transversus perinæi and sphincter muscles may be involved, but in a transverse tear the levator ani with the fascia and perhaps the mucous membrane is affected. The levator muscle when injured can usually only be diagnosed by feeling the divided and retracted edges through their mucous covering. This injury is followed by prolapsus uteri et vaginæ, cystocele and hemorrhoids.

The indications for treatment are to restore the parts as nearly as possible to a normal condition. In laceration of the sphincter and vagina as well as in the transverse tears the author advises the use of Dr. Emmet's operations or in the latter case his own modification of the Emmet method, which he describes. He prefers silk to silver wire in these operations. The flap operation is useful only in moderate lacerations.

The remaining papers on this day's programme were read by title.
Adjourned.

May 18th, 1893.

Morning session convened at 9.30.

Abstract of a paper entitled:

CLINICAL REPORT OF PYOSALPINX TREATED BY
UTERINE DRAINAGE WITH SUBSEQUENT CON-
CEPTION.

BY ROBERT A. MURRAY, M. D.,

New York.

The author claimed that many cases of pyosalpinx could be cured without resort to cœliotomy, and removal of the offending organs. From the pathology of Bermutz, thirty years ago, and the demonstrations of Lawson Tait, Hegar and many brilliant operators following their methods, gynecologists became convinced that the vast majority of cases diagnosed as pelvic cellulitis were really cases of pelvic peritonitis, resulting from disease of the Fallopian tubes and ovaries. Such reasoning, however, was deficient in that it did not go back to the cause of the disease in the tubes, and the treatment defective in not seeking to remove the endometrical inflammation which preceded the salpingitis. So there has been an era in which to the practical surgeon the diagnosis of tubal disease, especially when accompanied with recurring attacks of pelvic inflammation, was the absolute indication for cœliotomy and removal of tubes and ovaries. During this period of tubal operations, from 1877 to 1886, the author had a class in gynecology in a dispensary which afforded a large field for observation of cases of salpingitis. The patients were of the poorer class and could not be persuaded to go to a hospital, and the treatment employed was rest, applications of iodine and other alteratives to the cervical canal and vaginal vault, counter-irritants, hot vaginal douches as introduced by Dr. Emmet, and the use of the vaginal tampon, made with or without antiseptic and alterative drugs. Under such treatment, combined with general tonic treatment, many of the cases improved. Following the suggestion of Prof. C. M. Budd and Dr. Lent frequent application was made to the endometrium with Churchill's tincture of iodine, carbolic acid and other irritant alteratives, the cervix being first fully dilated, thus preventing uterine colic and attacks of peritonitis, and such treatment was followed by a marked decrease in size of the large tubes and uterus. In a number of cases after this treatment there occurred, coincident with relief from pain, a

profuse whitish discharge which led the author to believe that in his endeavor to cure the endometritis and contract a large subinvolved uterus he had afforded a means of drainage to the products of inflammatory action which, retained, were the cause of the disease. It has since been his custom to dilate the cervix and curette the endometrium, such treatment being followed by marked improvement in the patient's general condition and the disappearance of the tumor formed by the matted tubes and ovaries; the uterus became movable, and a number of cases became pregnant and were confined without any puerperal accident. Such cases were not only those of a catarrhal nature but also pyosalpinx as was proved by the periodical flow of pus while the patient was actually under observation, caused by gently pressing on the distended tube towards the uterus. The cases most benefitted by this treatment were those in which the tubes and ovaries were almost at the brim of the pelvis in their normal position. Those in which the tubes and ovaries were displaced downwards behind the uterus in Douglas' cul-de-sac and attached to the retroverted uterus were benefitted in that the whole mass could be lifted up by vaginal tamponage, supported and allowed to drain, and so become less tender and more movable; thus relieving the heavy bearing-down pains at the menstrual period. The author then narrated a number of cases both gonorrhoeal and puerperal in origin from which he deduced the following conclusions :

I. "That many cases of pyosalpinx are curable without mutilating operations if the endometritis be treated by curettage and drainage with strict antiseptic precautions.

II. "That true drainage of a pyosalpinx into the uterus is possible and does occur when the tubes and ovaries are on a level with the uterus and the uterine end of the Fallopian tubes is patulous or can be made so by treating the uterus.

III. "That uterine curettage and drainage should be practiced in every case before operation unless the tubes are very distended and thin, to cure the endometritis which may be and often is cause of trouble and of the lack of relief after coeliotomy and removal of the organs have been performed.

IV. "That even after pyosalpinx frequently the tubes and ovaries are not useless organs, the proof being that pregnancy occurs and the puerperium is normal.

V. "That only after proper treatment, the tubes, ovaries and uterus still remaining bound down by adhesions and continuing a menace to life and health, should the radical operation be done.

VI. "As a matter of observation in a large Maternity, there are very few cases of puerperal complication due to the presence or results of a former pyosalpinx."

DISCUSSION.

DR. GORDON: I agree with the President that this is one of the best papers presented at this meeting. It is a matter in which I have had a great deal of interest, and I am extremely glad that Dr. Murray has taken the pains to prepare this and present it in the way that he has. One of the last cases that I had before I came here is a case in point, and it is one of the many that I have had. But the criticism I am going to make on his paper is this—I do not believe in his method of treating the acute attack. I believe when you get peritonitis from any cause, whether salpingitis be the starting point or appendicitis or whatever it may be, that the method of all others is rapid, prompt, full, free catharsis. The Doctor talks of his opium treatment and all that. To me it is worse than useless, and it delays a rapid, prompt recovery. Therefore, I see at once the necessity of salines. If you do that immediately, first of all you limit the amount of suppuration you will get in your tubes, you will limit the amount and extent of your general peritonitis, and you will have unloaded all of the congested vessels as much as it is possible to unload them in any way, and in a great many of these cases you will get probably an opening into the rectum or vagina or a point that you can open into the vagina. Now, as soon as you have obtained relief for this pus you will get at once a lowering of temperature and a relief of the general symptoms. In a short time after that do what the Doctor has done in these cases—put the patient under the influence of ether and thoroughly dilate. Wash out with 1-2000 bichloride solution, curette with the sharp curette thoroughly and effectually, keep the dilating going on all the time that you do this—I dilate a half-dozen or a dozen times until I am sure that I have dilated thoroughly—and then with the sharp curette curette everything that you can reach and wash out with the bichloride solution. Then apply pure carbolic acid and thoroughly cauterize. Then dilate again after you have used the carbolic acid thoroughly but do not pack. I believe that when you have thoroughly dilated after you have used the carbolic acid that it is not good surgery, good gynecology, good medicine, or good common sense to pack. Give all the drainage that you possibly can give. I believe that with this method we do an immense deal of good and save

a great many cases. I fully agree with the conclusions that Dr. Murray has drawn, that you will not only save your patient at the time—you will save any operation of *cœliotomy* afterwards and you will leave your tubes in a condition where the patient may become pregnant afterwards.

Dr. JOHNSTONE: I did this operation about a month ago. I was deeply interested in the patient and had to watch for a long time before I would make up my mind to do this *curetting*. At last, however, I got her in condition for it. There was a decided lump upon the left side that was easily appreciable. After introducing the dilator, while the stream of water was flowing, I saw about an ounce and-a-half of dark, black stuff pour out from the cervix. It was not the fresh blood that a sound or dilator would have started. It was the same kind of stuff that we find in *hæmato-salpinx*. *Curettage* followed, with packing and drainage. The patient gained fifteen or twenty pounds and is well. How permanent it is going to be I cannot tell, but it seems like a perfect cure. That is one case I know that emptied into the uterus, for I saw it while it did it. It was an old, chronic affair. It was not *pyosalpinx*; it was *hæmatosalpinx*. Of course that would not happen in all cases. And we know, too, that the deflections in the tube are so great that it is only in the exceptional case that we will get thorough drainage from it. But where the inflammation is simply cellular, where it is not septic, I believe nearly all of these cases are materially modified if not absolutely cured by *curetting*, especially after they have passed into the sub-acute stages. I am satisfied that the use of the modern *curette* with drainage is a greater boon to women than *laparotomy* ever was.

Dr. EDEBOHLS: The point I wish to emphasize is that it is not necessary to remove all cases of *pyosalpinx*, because pregnancy often occurs after *pyosalpinx* has been diagnosed, and because that shows that the tubes at least have resumed their function. I would also emphasize the fact that in these confinements that occur after *pyosalpinx* has run its course and the woman has become impregnated later, there are no material complications in the puerperium. These are facts that have been observed by so many men that Dr. Murray's seven cases add simply to the strength of the position assumed by almost all men at the present time, and that is, that a pregnancy can and often does occur after the cure of a *pyosalpinx*. Of course the strength of the position depends upon how well our *pyosalpinx* diagnoses are made. First of all, you must be sure that you have had a

pyosalpinx, and secondly you must observe the patient subsequently and know that she became pregnant; and we should also know in a certain number of cases how these labors terminated and what course they took. If it be agreed that some cases of pyosalpinx can be cured without operation, the next point is to endeavor to diagnosticate such cases and to differentiate them from the cases in which this is not to be expected. That point is now, I think, engaging the minds and the attention of all active workers in the field of gynecology. There is only one rule, I think, that may be said to be fairly well established in aiding us to differentiate these cases, and this rule concerns the position of the tube. I believe that it is conceded that all cases of pyosalpinx in which the tube maintains its normal position, running out from the cornu of the uterus in a straight line to the pelvic wall, are cases which offer the best chance of drainage and cure in this way. On the other hand, when you have a pyosalpinx, prolapsed 'backward' into Douglas' sac, twisted a number of times and adherent in Douglas' sac, I think we must approach the treatment of such a case with the greatest misgiving as to our ability to obtain a permanent cure. These cases, I think, ought not to be subjected to such a long tentative treatment. Every case of pyosalpinx should be subjected to tentative treatment with a view to its cure, before operation is decided upon. As to the matter of treatment, I wish to state my present position, which I think is somewhat radical. I believe that with curettage, properly performed, there is no danger to the woman, even if she have a pyosalpinx at the time; and I think it can be properly performed with pus in the peritoneal cavity, if the operator be aware of the possibility and does his curettage carefully and properly.

Dr. NOBLE: I agree with the previous speaker that we have had no subject of greater importance before the society, because pelvic inflammation is the most common disease of women. Had Dr. Murray's paper had a different title I should have had practically nothing to say, but what he and some other gentlemen have said differs so radically from my own experience that while I appreciate the care with which this paper has been prepared and the care and skill with which these cases have been preserved, I myself must wait for additional evidence before I can accept his position fully. Personally I do not claim that I can tell a pyosalpinx in every case when I see it. I have frequently made a diagnosis of pyosalpinx and opened the abdomen and found perhaps a small, adherent ovarian tumor, perhaps only adherent appendages—and that has been the experience of all my friends and acquaint-

ances. Had these cases been reported as cases of pelvic inflammation which became well—perhaps adherent appendages—I should have had nothing to say. With reference to this stuff coming out of the uterus and the evidence of that being pus—I submit that it is not true. The uterine cavity can hold one to four drachms of fluid, and if one to four drachms of fluid come out of the external os, it simply means it has come out of the uterus, but whether out of the tube is an open question. In operating for pyosalpinx I have removed a great many, and to the best of my recollection not more than one or two have had a patulous tube toward the uterine end, and in only a few cases has the pus found its way to the end of the tube; even when you squeeze the tube in your hand the pus would not run out. Not only that, but it is a well-known fact that there are one to three constrictions in the tube and that there have been one to three abscesses in the tube, so that even if the pus ran out of the one next to the uterus, you have one or two more abscesses left. I do not question at all that particularly in puerperal cases very many women who have peritonitis get entirely well, even sometimes when they have an abscess. I reported such a case quite recently. Personally I do not question that occasionally a tube empties out, but I think it is decidedly an exception and not the rule, and in practice we cannot depend on exceptions in the treatment of cases. There is no doubt that cases of pyosalpinx do recover when the pus is evacuated. Occasionally there is only one sac in the pyosalpinx; if it ruptures through the vagina and the pus runs out there is no doubt the woman gets well, but that is a very painful and long drawn-out way of curing the case and not infrequently in these cases you have an adherent and crippled appendage left, and the woman suffers so much that an operation to relieve her from such suffering is subsequently necessary.

Dr. MURRAY: I think one point of Dr. Noble's I covered in the deductions at the end of my article, in referring to those chronic cases in which I advise and do *coeliotomy*. But I do believe, and Dr. Edebohls has reinforced my statement, that the curettage can always be done, even, as he said, when pus is in the peritoneal cavity, if we are aware of the fact and handle the patient in consonance with it. I believe it should always be done before the *coeliotomy* is practiced, and while in critical cases we will still need to take out tubes and ovaries, we should always try a tentative treatment so as to give the patient the advantage of getting well without the radical operation. The very fact that Dr. Noble doubts the diagnosis is a reason for

insisting that this previous treatment should be given. We have all opened the abdomen for pyosalpingitis and found ourselves mistaken, and we ought to give the patient the benefit of the doubt. We should remember our inability to make a diagnosis except by one method, by the passing of a needle absolutely into the pus tube, which is the only absolute way without opening the vagina. As I said, these cases—three of them—of the emptying of those tubes of pyosalpinx into the uterus were observed by from one to two members of this Society, and in every case a removal of the organs was absolutely recommended.

Abstract of a paper entitled:

THE ELASTIC LIGATURE IN SUPRAVAGINAL HYSTERECTOMY.

BY STANSBURY R. SUTTON, M. D.

Pittsburgh, Pa.

The author calls attention to the fact that the extra-peritoneal method of treating the pedicle in supravaginal hysterectomy was introduced some twelve years ago by Péan—he using the instrument devised by Kœberlé consisting of a wire loop and a screw constrictor to secure the pedicle in the lower angle of the abdominal wound. By the use of this instrument the extra-peritoneal method of treating the pedicle has been proved successful. The technique of the operation has been perfected, the only question being as to whether the wire constrictor of Kœberlé or the elastic ligature of Kleeberg shall be used. Some years ago the author abandoned the intra-peritoneal treatment and resorted to the extra-peritoneal with wire constrictor which he followed without accident or loss until about three years ago when he encountered severe and fatal hemorrhage from the stump. Having observed at Kiel Esmarch's application of the rubber ligature in general surgery and Kleeberg's constricting rubber ligature to the uterus below the fundus in the operation for fibroids, the author was impressed with the advantage and reliability of the constricting properties of the rubber or elastic ligature.

The uterine neck not being an unyielding body will shrink away from the wire and unless the operator be on the alert to occasionally tighten the wire, thus following up the receding tissues, it is but a question of time until hemorrhage occurs. Rubber is therefore the ideal substance for the composition of a constrictor for the compression of tissue such as a yielding cervix uteri is composed of. It matters little whether the solid elastic ligature, say five millimètres in diameter or elastic tubing the lumen of which is five millimètres in diameter be

adopted. Such a constrictor turned twice about the cervix underneath the transfixing pin, secured by a double knot behind which a heavy silk ligature has been firmly tied, and closely in front of which a pair of lock-handled forceps grasps the free end of the ligature, furnishes us with a method of constriction which is absolutely safe against hemorrhage under all circumstances. There is no need to tighten this ligature, it follows up the pedicle painlessly and effectually. The author follows the technique of the method of Hegar which is depicted on Page 290, Vol. 1 of Pozzi's Gynæcology. During three years in which the author has used this method he has found no objection to it. The author inclines to the belief that the method of entire removal of the cervix will soon be adopted but he wishes to emphasize the point that in cases where the method of operating involves extra-peritoneal treatment of the pedicle, the old wire constrictor is to be rejected in favor of the elastic ligature.

Abstract of a paper entitled :

VAGINAL ENTEROCELE IN PREGNANCY AND LABOR.

BY BARTON C. HIRST, M. D.,

Philadelphia.

This rare complication is due to the stretching out of the posterior cul-de-sac during labor. It can only occur from the application of extreme force, as in unusually violent expulsion of the foetus. The differential diagnosis is not always made between this condition and prolapse of both the anterior and posterior vaginal walls, prolapsed tubes and even ovarian tumors. It can be reduced sometimes by the hand either in the vagina or in the rectum. If irreducible or if it become strangulated, the condition is dangerous and the prognosis bad. A further danger is the possible rupture of the hernial sac during labor. Gangrene of the sac contents has not been reported.

Reliance especially upon position and manipulation is the best treatment for these cases, but the surgeon must be prepared to perform laparotomy in an emergency, where the enterocele is irreducible.

Abstract of a paper entitled :

CALCIFIED TUMORS OF THE OVARY.

BY J. WHITRIDGE WILLIAMS, M. D.,

Baltimore.

These tumors are due to the calcification of fibromata or Graafian follicles, though they have often been supposed to be bony tumors.

True ossification in the ovary is practically never met with. Calcified tumors of the ovary contain about sixty-five per cent. of salts. A curious fact is that the presence of these growths does not interfere with the function of the rest and healthy portion of the organ. Three cases of such calcification of the corpora tuba are on record.

The process is a slow one and begins with necrosis and subsequent atrophy first of the renal epithelium. The author has produced this condition in the smaller animals by means of different agents, especially the salts of mercury. He does not believe a differential diagnosis possible until the abdomen has been opened, and he maintains the only indication in treatment is removal.

DISCUSSION.

Dr. CURRIER: In view of the fact that these deposits are so common in other parts of the body, especially in the joints, it seems to me somewhat remarkable that we should find them so very rarely and infrequently in such extremely vascular organs as the ovary. The specimens presented are extremely interesting; and in regard to the larger specimen the particular thing is its density—denser even than stone formation. And then another point is the fact that notwithstanding these degenerative processes may be going on in the organ, the functional processes continue unimpaired. I would like to ask Dr. Williams to state in his closing remarks whether he considers the condition analogous to that occurring in the rheumatic condition, and whether the same causes that operate in that case would not be likely to operate in the ovaries.

Dr. JOHNSTONE: There are two points I would like to speak of. One is pathological and the other is a clinical deduction to be drawn from it. I think the Doctor has given us the key exactly to the production of these things. As we all know, it is the last step in the degenerative changes. The interesting experiment spoken of, of the ligation of the artery, is exactly what occurs in this formation. We all know the old, old story of cirrhosis of the liver. In just the same way these vessels become constricted and you have this process going on and this deposit of lime. The clinical deduction is simply to warn us not to mistake these things for dermoids. That has been done more than once.

Dr. WILLIAMS: With regard to the remarks of Dr. Currier, I would say that I do not consider the process at all identical with that occurring in gout. The gouty changes, as I understand, are due more particularly

to deposits of urates in the joints. In this case it is not the deposit of a urate at all. I would call especial attention to the fact that the three women from whom these tumors were removed were all comparatively young women. One of the cases was a girl nineteen years old.

Abstract of a paper entitled :

SOME OF THE ELEMENTS OF SUCCESS IN CÆLI-
OTOMY.

BY A. LAPHORN SMITH, M. D.

Montreal, Can.

Although abdominal sections have been performed when the indication did not warrant such a radical measure, on the other hand, the imperative indication such as pus in the ovaries or tubes has not been followed as much as should be or will be. The author adopts two methods in order to determine the elements of our present success in abdominal surgery. He has questioned a large number of honest and skillful operators in regard to their fatal cases and the cause of death in each case. He has closely studied the methods of a great number of operators whose death-rate has reached the minimum figure.

The following causes of death were found to be operative after section :

- 1st.—Sepsis or peritonitis.
- 2nd.—Hemorrhage either immediate (otherwise called shock) or secondary.
- 3rd.—Prolonged anæsthesia.
- 4th.—Interference with the peristalsis of the bowels.
- 5th.—Procrastination of the operation.

A number of minor accidents, such as abscesses, ventral hernia and wounds of the bladder, which while not dangerous to life yet mar the success of the operation.

Sepsis or peritonitis can be avoided without costly operating rooms. The author states that he has operated successfully by cœliotomy in the houses of the very poor in the least sanitary districts of Montreal. In the operating room at the Woman's Hospital case after case has made the most uninterrupted recovery and not only are laparotomies done but other operations, even the curetting of puerperal fever cases. Dr. Smith states that if visitors were not allowed to touch anything used at the operation he does not think that attendance on a case of scarlet

fever or diphtheria places the patient in any peril. He believes that precautions should be taken to prevent visitors from conveying infection by touch. In regard to nurses, he believes in making sure that they have carried out efficient antiseptic precautions. He has discarded sponges using in their place gauze sewed together in six layers which are first placed in a sublimate solution and afterwards boiled for several hours. They are not thrown away after the operation but are boiled for an hour in a solution of washing-soda to dissolve out the fibrin and are then dried in an oven at 212° F. No antiseptics are used about the instruments. A teaspoonful of washing soda in a pail of water in which the instruments are boiled prevents the steel ones from rusting. The knives are wrapped in the gauze pads to protect their edges but as frequent heating and gradual cooling of steel-cutting instruments anneals or softens their temper he states that their alternate dipping into boiling and iced water for a few times will restore their temper. He has used the silkworm gut for abdominal sutures but intends to give the catgut a trial in the future. When possible the patient is given several hot baths on the night preceding the operation in which plenty of laundry soap is used of twenty to thirty minutes duration and the patient is kept in a clean bed. He shaves the abdomen and the pubis, scrubs the abdomen with a brush and soap, gives a douch of 1-500 bichloride and then rinses off with boiled water for the sake of the instruments. The patient should be firmly fastened to the table and her hands should be covered with gauze or sterilized towels to prevent auto-infection. The bladder should be evacuated just before the operation and if the perforation of the line of incision is made at its upper part and the operator work downward toward the pubis the danger of wounding the bladder may be avoided. Dr. Smith thinks that time should not be lost in trying to find the linea alba, and states that the union is probably firmer when the knife goes through the rectus muscle. He emphasizes the importance of opening the peritoneum on a director and states that he has seen the intestines opened in cutting through this membrane by the world's greatest surgeons. He believes that the use of pressure forceps is one of the principal causes of abscesses in the abdominal walls. He recommends in their place hot compresses or torsion.

Irrigation of the peritoneal cavity is considered important. He says: "I have over and over again ruptured the most stinking abscesses, and their contents have inundated the peritoneal cavity, and yet the patients have made a splendid recovery." He uses plain boiled water cooled down to 110° F. or 105° F.

The patient's fate is sealed when the wound is sutured. The longest and narrowest drainage-tubes are employed. They have very small perforations to prevent the incarceration of the intestines and should be gently turned half round several times a day. The tube is frequently pumped out by a bulb syringe with a long soft rubber nozzle. Silkworm gut is used for the abdominal wall.

After sepsis, hemorrhage appears to be the principal cause of death following section in the practice of many first-class operators. The term shock should be disregarded and all deaths formerly grouped under this head should be put down to hemorrhage or prolonged anæsthesia.

Dr. SMITH quotes a case occurring in his practice where death occurred from hemorrhage. A very wide pedicle was ligated in segments. The drainage-tube showed that hemorrhage was going on, but although a tiny artery which was bleeding in the broad ligament below the ligature was tied, the patient was too far gone to recover. He states that he knows of several cases where deaths have occurred from the slipping of the ligature from the pedicle. He states that stout catgut of good quality is safer than silk, because when wet it contracts. If a piece of expanded laminaria digitata be tied with silk and catgut at different portions and then immersed in water, in an hour or two a distinct constriction will be observed under the catgut, while no change is evident under the silk. For oozing the author prefers irrigation with hot water. In wounds of the intestine the Lembert suture is preferred to the galvano-cautery, because the author noticed that in a section which followed a month after the use of the cautery for this purpose, the spot which had been touched was firmly agglutinated to the surrounding coils so that it was impossible to detach it. He is opposed to the use of the perchloride of iron and other such astringents. Gauze he considers safe. Most of the hemorrhage is due to delayed operations and includes not only most of the cases of death from hemorrhage but also deaths from prolonged anæsthesia.

Prolonged anæsthesia is regarded as so important a factor in raising the death-rate, that the author states that "one might almost formulate the rule that any abdominal operation which is going to require profound anæsthesia for more than an hour had better not be done at all, or had better be stopped when the hour is up. The time element is so important that not a single second of it should be lost in conversation or even in lecturing."

The fourth element of success is the care of the intestines. Paralysis and other evils follow the disregard of this rule. They should not be seen if it is possible to avoid seeing them. Hot water irrigation is better than sponging, it is also a stimulant.

In abdominal distension when everything else has failed, Dr. Skene's prescription of six or eight grains of quinine dissolved in aromatic sulphuric acid, with half an ounce of water and enough acacia to make the mixture blend, is administered by anema with the best results. The author urges that the omentum should be drawn down to prevent adhesion to the abdominal wall.

In conclusion, the author says: "We may, therefore, sum up the elements of success in coeliotomy, as far as we know them at the present time, in the avoidance of sepsis or peritonitis, the avoidance of hemorrhage, the avoidance of prolonged anæsthesia, the avoidance of injury to the bowels or bladder, and the avoidance of ventral hernia and mural abscesses. From the experience of a great number of operators, we may infer that if we lost no patients from any of these causes, we might perform a thousand as well as a hundred abdominal sections without a death."

DISCUSSION.

Dr. BALDWIN: As far as gauze pads are concerned as a substitute for sponges, the idea was that they could be thrown away and need not be used again. If they are going to be re-cleaned we had better use the sponge. I see no reason why a menstruating nurse should not be in the operating room. If catgut could be cleaned, silk certainly can be cleaned. Catgut is the hardest material to disinfect. I use silk altogether in my abdominal work and never saw any cause to regret it. As far as relates to abscesses being formed in the abdominal wall, I think a great many of them are due to the taking out of the stitches. The stitch-hole abscesses which I have seen in my own work in the last two or three years have occurred two or three days after taking the stitches out. I see no reason why we should use dusting powders of any kind in our rooms. They are moist ten minutes after they are put there and do no good. I can see no utility at all in leaving the stitches in for a month. There may be some advantage but I cannot see it. I generally leave them in eight or nine days.

Dr. SIMS: I agree with Dr. Baldwin as to the use of silk in these cases. I always use the pads but never use them over again.

Abstract of a paper entitled :

PRACTICAL POINTS IN DRESS REFORM.

BY ROBERT L. DICKINSON, M.D.

Brooklyn.

Diagrams illustrated the harmful effects of corsets, bands, and the overlapping of several garments upon abdominal respiration, ease of carriage and the physiological growth of different organs. The author appreciated the difficulty of proposing any practical reform which would appear to come into conflict with the dicta of fashion. He, however, presented four illustrations of the essential portions of female dress, of form consistent with the laws of health and common sense. The first, an undergarment, in one piece, fitted the body closely from the neck to the ankles ; the second, of heavy knit material, for outdoor use in winter, was a pair of drawers, supporting themselves by their own elasticity, as they fitted close to the figure ; the third was a species of chemise of stiff muslin hanging from the shoulders by broad bands and long enough to cover the legs ; the fourth was the gown itself, of one piece and capable of properly fitting the natural figure, with any desired ornamentation. Another illustration showed another, though non-essential, garment in the nature of a cloak or wrap, with which Fashion might have her will.

On motion of Dr. E. C. Dudley, a vote of thanks was tendered to Dr. Dickinson for his presentation of this important subject.

*Abstract of a paper entitled :*THE QUESTION OF OPERATION IN CASES OF
CHRONIC OVARITIS.

BY CHARLES P. NOBLE, M. D.

Philadelphia.

The author quoted a number of authorities in this country and abroad in reference to the effects and the indications in this disease and maintained that " whenever chronic ovaritis resists well-directed treatment, continued over one or more years and the life of the patient is made unbearable by reason of the disease, it is not only justifiable but urgent to remove the offending organs," while acknowledging that the operation was liable to abuse, (the stories of which in the past and present be believed to be greatly exaggerated, however), he considered that many cases could be benefitted in no other way. He himself had

operated for this disease but fifteen times upon thirteen women. Two of these were secondary laparotomies where a unilateral removal had failed to relieve and four were upon organs in which there was an arrest of development plus this disease. He narrated a number of the cases having complications or symptoms of special interest.

He concluded by hoping that the true indications for removal of the ovaries would be recognized by all and he offered, in rebuttal of the possible charge of an excessive desire to remove ovaries, the fact that during the time in which he had operated for chronic ovaritis he had performed one hundred and seventy-four *cœliotomies*. This brought his fifteen cases to a very moderate percentage.

Other things being equal he considered the poverty of the patient and the necessity of hard work for daily support a marked indication for the speedy resort to radical measures.

Dr. WILLIAMS: I would like to ask Dr. Noble what he means by the term "chronic inflammation," because I have examined a considerable number of ovaries, working on this subject a number of hours a day for the last four or five years, and I have yet to see a case which presents the pathological condition of chronic inflammation. I do not mean to say that there is not an inflammatory condition, but I have never met a case of chronic ovaritis, and I think the majority of these cases of shrivelled up ovary are the result of imperfect development rather than the result of inflammation. I think that is borne out by the fact that even when they are removed the woman goes on and suffers almost as much as she does before. In those cases where the ovary is perfectly hard I have still been unable to find, pathologically speaking, chronic inflammation. The term "chronic inflammation" is a useful one from the clinical standpoint, no doubt, but I think that in a number of these cases we have to deal with peritoneal adhesions and that is about all.

Dr. E. C. DUDLEY: I believe these expressions to which Dr. Williams objects are now taken to mean not an inflammation but a condition which has been left behind after the inflammation, the inflammation having itself entirely subsided.

Dr. NOBLE: My paper was written from the clinical standpoint, but the pathologists of the last generation led us into the habit of calling it chronic inflammation. A number of these specimens were submitted to pathologists, and the only conditions reported were the large excess of cells about the blood vessels, but there was no scar tissue in very many cases, according to the pathologist's report. I have no doubt

that a very large percentage of cases of so-called chronic ovaritis are really cases of arrested development.

The remaining papers were read by title.

On motion, the retiring President was tendered a vote of thanks for his services.

Adjourned.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY.¹

Dr. J. E. KELLY, of New York, read a paper entitled:

The Mechanism of Symphyseotomy.

He demonstrated that when the pubic bones are devaricated, to the extent of two inches at the symphysis pubes, the separation at the sacro-

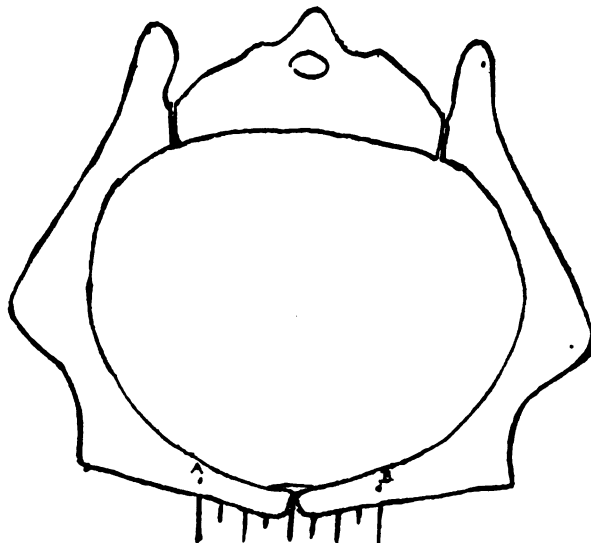


FIG. I.

iliac synchondrosis is very slight. This point is illustrated in figures 1 and 2 which represent oblique sections of the pelvis. Figure 1 indicates

¹ These illustrations were taken from Dr. Kelly's official diagrams.

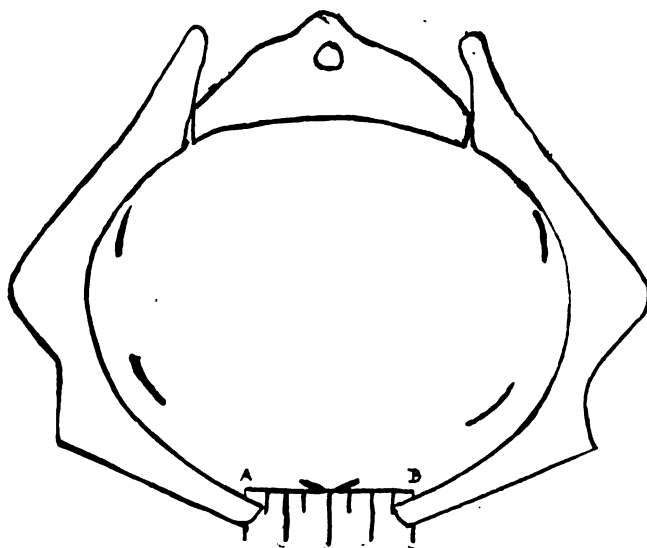
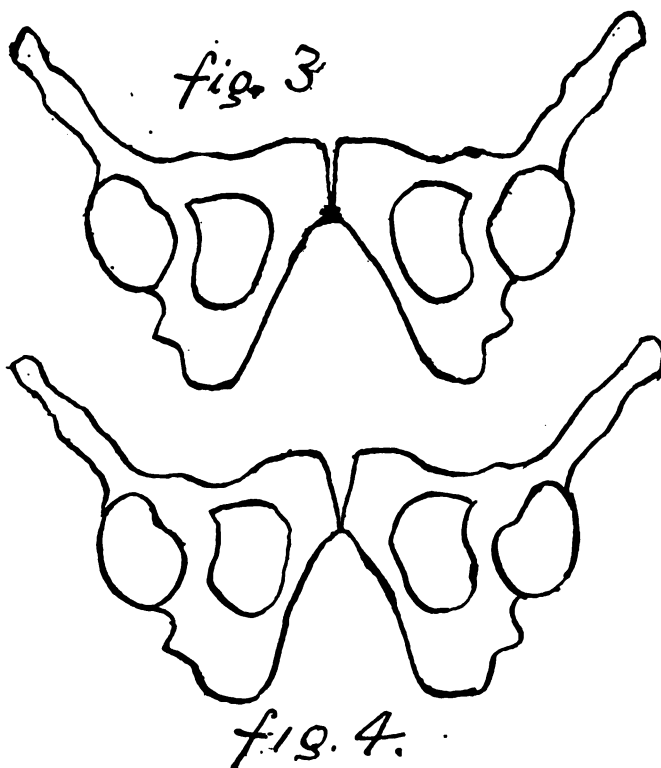


FIG. 2.



the close approximation of the articular surfaces at the anterior margin of the sacro-iliac synchondrosis in the normal condition, and Figure 2 shows extreme divergence between the pubic bones, while a comparatively slight separation occurs at the anterior margin of the sacro-iliac articulation. This indicates the slight danger that exists of injuring the sacro-iliac synchondrosis in symphyseotomy. In Figures 1 and 2 the line A. B. is situated at the same distance from the promontory of the sacrum, and consequently, it will be noticed that very little space is gained in the antero-posterior diameter by the separation of the pubic bones and, also, that the ratio of increase in this diameter is still less as the distance is increased, even to four inches, while a very decided advantage is obtained in the oblique and transverse diameters. Figures 3 and 4 show that unless the sub-pubic ligament is divided, symphyseotomy is obstructive rather than beneficial, as, while this structure is intact, the tubera ischiorum are approximated when separation occurs between the superior portions of the symphysis.

The space between the pubic bones is wedge-shaped from above downwards, and before backwards and, consequently, Dr. Kelly considers that incisions through the fibro-cartilage should be in this direction.

ITEMS OF INTEREST.

American Electro-Therapeutic Association.—The third annual meeting of the American Electro-Therapeutic Association will be held in Chicago, September 12, 13 and 14, at Appollo Hall,†Central Music Hall Block. Members of the medical profession interested in Electro-Therapeutics are cordially invited to attend.

AUGUSTIN H. GOELET, M. D., President.

MARGARET A. CLEAVES, M. D., Secretary.

Dr. George M. Edebohls has recently been elected Professor of Diseases of Women at the N. Y. Post-Graduate School and Hospital.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

SEPTEMBER, 1893.

PATHOLOGY AND TREATMENT OF INJURIES OF THE
PELVIC FLOOR,¹

WITH SPECIAL REFERENCE TO SUBCUTANEOUS LACERATIONS OF THE
LEVATOR ANI AND TRANSVERSUS PERINÆI MUSCLES AND
THE FORMATION OF RECTOCELE.

BY ALEXANDER J. C. SKENE, M. D.,

Brooklyn, N. Y.

I intend to add a few items to a subject that has already been elaborately treated by many writers. Such minor contributions as I have to offer could be soon made, were it not that in order to show the effect of the few touches which I propose to add to the original portraiture, abundantly presented in medical literature, it is necessary to reproduce in brief outline the portions which I desire to treat. The few facts which I have to present have been gathered during observations made from the standpoint of both physician and surgeon. In obstetric practice one has an opportunity to investigate lesions at

¹ Read before the The American Gynæcological Society, May 17, 1893.

This paper has already appeared among the original contributions both of the American Gynæcological Journal and The Annals of Gynæcology and Pædiatry. Its author promised this journal the paper some time ago, and we assume that its appearance in the columns of our contemporaries, other than in abstract, is due to carelessness of Dr. Skene's secretary or to the stenographer. We present with the paper reproductions of Dr. Dickinson's excellent illustrations, and believe no further explanation is necessary for again publishing this valuable contribution.

the time when they occur, while a surgeon has an opportunity to study the pathological changes which takes place subsequently. This method of investigation should lead to definite and accurate conclusions, provided the observer has clear views regarding the anatomy and function of the pelvic floor, the injuries of which are under consideration.

Regarded as a mechanical structure the pelvic floor resembles a diaphragm composed of muscles and fascia which close the pelvic outlet. Its borders are attached to the bony walls of the pelvis, and it is held at its proper elevation by the levator ani muscle. Its mechanism is based upon the principles of the suspension bridge, the anchorage being represented by the pelvic bones, the floor representing the bridge and the levator ani muscle corresponding to the sustaining cable. (See figure I.) To make sure of being understood, the following classification is offered for consideration, and criticism, if need be:

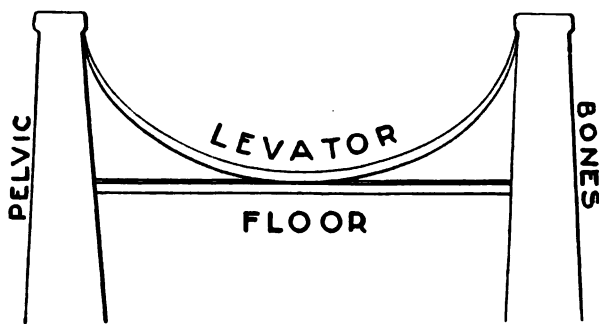


FIG. 1.

All the injuries that are sustained by the pelvic floor are divided into two classes: first, those that occur in the median line of the floor and in a direction corresponding to the axis of the pelvis; and, second, those injuries which occur above the floor itself, transverse internal lacerations. The laceration in the median line occurs in various forms and degrees; first, a solution of continuity of all the tissues extending from the posterior commissure to the sphincter ani; second, the same injury as the above plus laceration of the sphincter. These are the injuries which have been recognized for ages: to these I have added another which I have found during my investigations, viz., subcutaneous lacerations of the muscles and fascia in the median line, usually limited to

the transversus perinaei muscle and fascia, but in rare cases involving the sphincter ani muscle.

Years ago, when I first called attention to this subject, I was not aware that the sphincter ani was ever involved in this form of injury, but I have seen since then at least three cases in which the sphincter ani was lacerated completely while the integument and mucous membrane of the vagina remained uninjured. The evidences that my observations were correct are that there was incontinence, the integument on either side was depressed where the lower fibres of the retracted muscles had drawn it inwards, and the most careful examination proved beyond a question that the integument had never been lacerated. I am aware of the fact that a complete laceration in the median line may unite by first intention leaving the sphincter ani ununited, and that the scar may be so faint as to be easily overlooked, but in the cases I have referred to I am positive from my own examination, and that of my associates, that no such injury to the integument ever occurred. Furthermore, I found in operating that when the integument was divided some thickening of the cellular tissue was apparent, due no doubt to a reparative exude which occurred at the time of the injury. I also found the ends of the muscle far apart, the lacerated ends being completely healed over by natural processes. In looking back I recall several more cases of this kind, but not having studied them with sufficient care, they are not available for my present purpose.

Injuries of the second class, which are transverse, and have been described as internal lacerations, consist in laceration of the anterior fibres of the levator ani muscle and fascia, and this is usually attended with separation of the muscular layer of the vaginal wall from the pelvic floor. In some cases the laceration is complete, involving the mucous membrane as well as the muscular coat of the vagina, and in very rare cases the laceration reaches upwards and outwards as far as the laceration of the levator ani muscle extends, but as a rule the laceration of the levator ani is subcutaneous, that is to say, not attended with laceration of the mucous membrane of the vaginal wall. The injury of this muscle I believe was first described in my early writing on the subject, but if this is an unjust claim on my part I shall be happy to have it corrected at this time.

In regard to the pathology of complete lacerations in the median line, nothing need be said as the subject is familiar to those who have interest in the matter, excepting subcutaneous lacerations of the

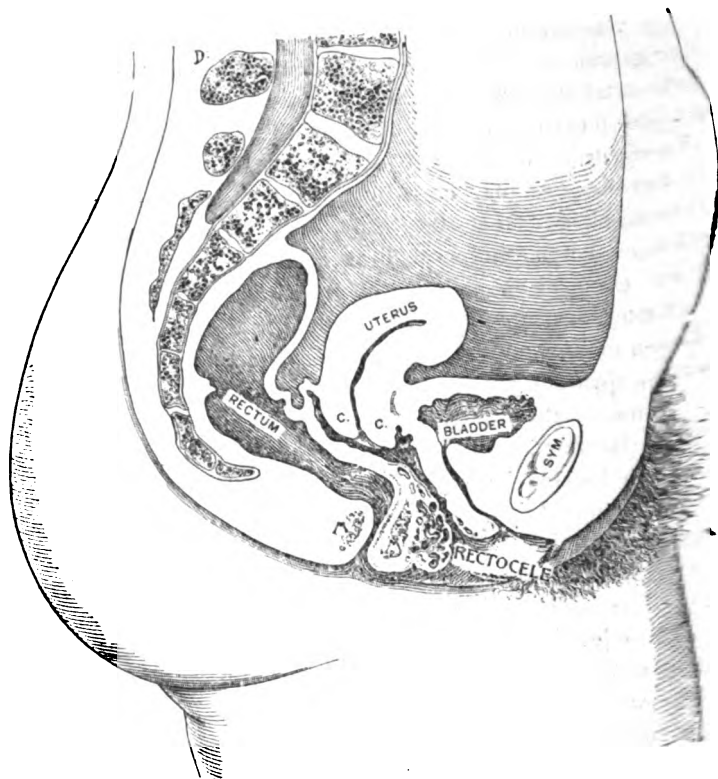


FIG. II.

muscle and fascia. These escape notice at the time when they occur unless carefully looked for. They are easily detected however, by grasping the pelvic floor in the median line between the thumb and finger. By this manipulation it will be found that all the structures, except the mucous membrane of the vagina and integument, have been divided and retracted, and there is nothing left of the fascia and muscular structure in the median line excepting the sphincter ani muscle.

The transverse internal laceration, when entirely confined to the muscular structures of the vagina and levator ani muscle, is not an easy lesion to detect owing to the fact that a similar condition is produced by sagging of the pelvic floor, following delivery and temporary paralysis.

The pathological changes which ultimately take place in the transverse lacerations are : A marked sagging of the pelvic floor, which in itself may be perfectly normal in structure. This sagging is apparent upon inspection, and as I have elsewhere pointed out, the diagnosis of this laceration is made from the fact that under stimulation the levator ani muscle fails to perform its function. The action of this muscle is to a large extent voluntary, and this voluntary power is lost and stimulation fails to call it into action. Of course the continuation of this sagging gives rise to or permits prolapsus of the vaginal walls, uterus and bladder. Rectocele is also said to follow in this injury, and possibly it may in rare cases, but I am fully assured from careful observation that the so-called rectocele is not a rectocele at all, but a prolapsus of the vaginal wall and a varicose condition of the veins lying between the vagina and the rectum just within or above the pelvic floor. This I have been able to demonstrate, in a vast majority of cases, by an examination which proved that there was no rectal diverticulum pointing towards the vulva, and that pressure upon the so-called rectocele caused it to disappear as soon as the blood was pressed out of the enlarged veins. This is shown in figure II. An argument which has been made against this by one of my friends, to whom I have explained my views on the subject, is that he has noticed in fæcal accumulations the rectocele protruded through the vulva, especially on voluntary efforts being made to evacuate the rectum. This is offset by the fact that in most of such cases I have found that when the rectum is emptied its muscular walls contract and there is no diverticulum left. Of course the rectum loses its support when the levator ani muscle is lacerated, and is easily overdilated, and the distension must be towards the vagina and vulva, but is tem-

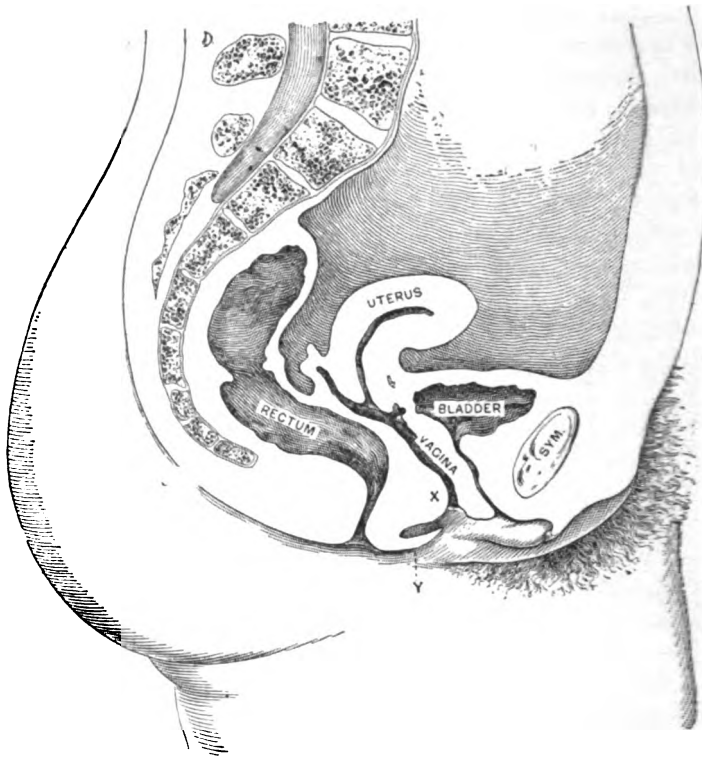


FIG. III.

porary, not permanent, and hence not a rectocele. I may say further in reference to this form of injury that it is followed by pathological changes which give rise to more distressing symptoms than any other. It is in this form of injury that prolapsus more frequently occurs, not only of the uterus and vaginal walls, but also of the bladder; and there is greater liability than in any other injury to the formation of varicose veins around the lower portion of the vagina and rectum, which give rise to no small degree of suffering. In this injury, too, subinvolution of the vagina and uterus most frequently occurs. All this has been clearly pointed out by Dr. Emmet, and by him alone as far as I have been able to discover. More than that, I believe that there is in addition to the subinvolution of the vagina a certain degree of areolar hyperlapse, which accounts for the extraordinary thickening of the vaginal walls seen in this class; still more, if relief is not obtained there comes a time when atrophic changes of the vaginal walls take place which cause further changes in the venous circulation, and if the injury goes many years without repair, atrophy of the levator ani muscle occurs, and such changed structures become absolutely incurable by any method of operating. It is quite a number of years (sixteen or eighteen) since I called attention to the atrophic changes in the muscles which take place in cases of long standing, and though a certain amount of temporary relief is obtained by operating, prolapsus of all the pelvic organs recurs.

I formerly believed that in connection with transverse lacerations a subcutaneous laceration very often occurred, but I am satisfied now, after more extended observation, that in place of a laceration there is a thinning out and absorption of the tissues in the median line which produces a condition similar to that of subcutaneous laceration. This absorption is brought about by the sagging of the pelvic floor which makes undue traction upon the transversus perinæi muscles and fascia and as the posterior wall becomes prolapsed additional pressure is made at that point, and hence the absorption or atrophy which takes place in the median line. This change of structure resembles in every particular the lesion of subcutaneous laceration, but it is only found in cases that have existed for a long time, in which there is marked prolapsus of the vaginal walls and, of course, great sagging of the entire pelvic floor. These facts in regard to pathology have a very important bearing upon the question of treatment, as will be noted further on.

In laceration of all the tissues from the posterior commissure down to the sphincter ani muscle the scar tissue is the only pathological con-

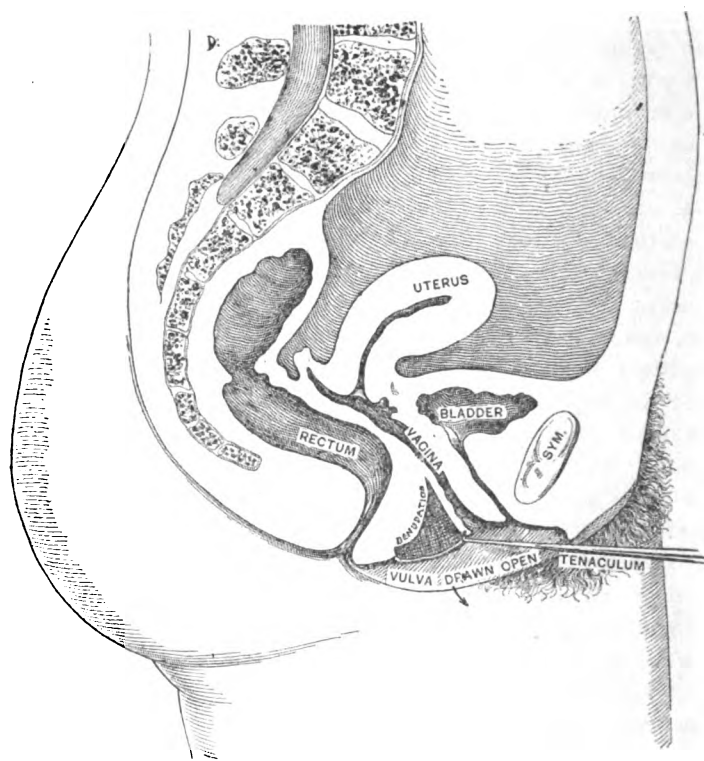


FIG. IV.

dition which is found and that rarely gives rise, at least for a number of years, to any suffering, because if the levator ani and the bulbo-cavernosus muscles are uninjured the remaining portion of the pelvic floor is brought forward and sufficiently closes the vulva to prevent prolapsus of the pelvic organs.

In regard to complete laceration involving the sphincter ani, I accept in full the pathology and treatment as described by Emmet, especially the treatment. A word, however, may be said with reference to certain changes which take place in subcutaneous laceration mentioned above. Immediately after it occurs it is easily detected, but after convalescence from confinement an examination will show an apparently sufficient pelvic floor, because the space between the divided ends of the muscles and fascia is filled in with an exudate which restores for the time-being the appearance of that ring or band which closes the vulva, and which has been called the perineal body, without any very good reason for the name. In a few months this exudate becomes absorbed and the pelvic floor at this point becomes thinned out and presents the physical signs to the touch that are present in the recent injury. See figure III. There is in this form of injury a little more sagging in the middle portion of the pelvic floor than is found in complete laceration.

TREATMENT.

While one can easily understand that during the experimental stage of plastic surgery of the pelvic floor many different operations were practiced and commended by numerous surgeons, there is no reason for so many different ways of surgically treating injuries of the pelvic floor at this time. As there are certain definite lesions, and the object of surgery is to restore the injured structures to their original condition, or as near as art and science can do so, there should be, by this time, more definite agreement among operators regarding this branch of plastic surgery. Perhaps the diversity of opinion arises from the fact that the exact nature of the injuries and the changes of structure which subsequently occur are not clearly understood. It may be for some such reason that in this department of gynecology there is such an extraordinary diversity in both theory and practice.

I operate simply by removing the scar tissue, and in so doing vivify the ends of the muscles and fascia that have been divided, when, in the median line, injuries extend from the posterior commissure to, and include all the tissues of the pelvic floor at this point. The vaginal

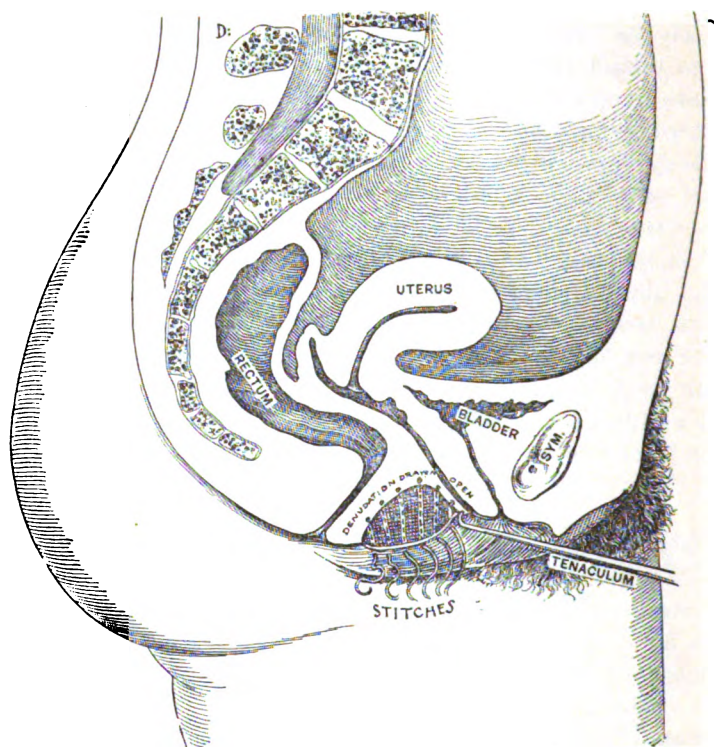


FIG. V.

wall which has been attached to the lower angle of the laceration is liberated and raised up so as to form the inner surface of the pelvic floor. The lateral surfaces are united with sutures, the upper two or three taking in the posterior surface of the vaginal wall, and uniting it to the inner surface of the pelvic floor.

In complete laceration involving the sphincter ani, I follow closely the principles involved in the operation as laid down by Dr. Emmet. If in any way I differ from him in some of the minor details, such as using silk in place of silver sutures, it is simply because it is convenient for me personally to do so, not with any disposition to try to improve upon what I conceive to be a perfect operation. This much of the treatment might be summed up in a sentence as follows, viz.: That in this class of injuries I follow the methods which appear to me to have resulted from the contributions of all the best operators from Baker Brown to Thomas Addis Emmet.

I especially desire to call attention to subcutaneous laceration in the median line when it involves the fascia and transversus perinæi muscle alone. Laceration of the sphincter ani subcutaneously is so rare that it may be omitted from the present consideration. The first stage in this operation is to make the incomplete laceration complete by dividing the integument from the posterior commissure down to the upper border of the sphincter ani, and any loose cellular tissue which may exist between the integument and the vaginal wall. If the termination of the vaginal wall is drawn downwards towards the sphincter and there is prolapsus of the posterior vaginal wall, giving the conditions seen in figure III, the vaginal wall is liberated below and separated from the cellular so that it can be raised up to the posterior commissure. Any thickened cellular tissue or exudate that is found in the wound is carefully trimmed out until the fascia and muscle on either side are reached. Quite often it is necessary to trim off some of the superfluous integument which has been produced by stretching. The wound is then closed in the same way as a recent laceration is sutured, excepting that the vaginal wall is caught in the upper sutures and united thereby to the pelvic floor as heretofore mentioned. This injury is the only one in which any kind of "flap-splitting" seems to be indicated or could possibly be of the slightest use in overcoming the injury.

Treatment of the Transverse or Internal Lacerations.

Dr. Emmet was the first surgeon to devise an operation for the relief of this injury. I had for long observed and comprehended the

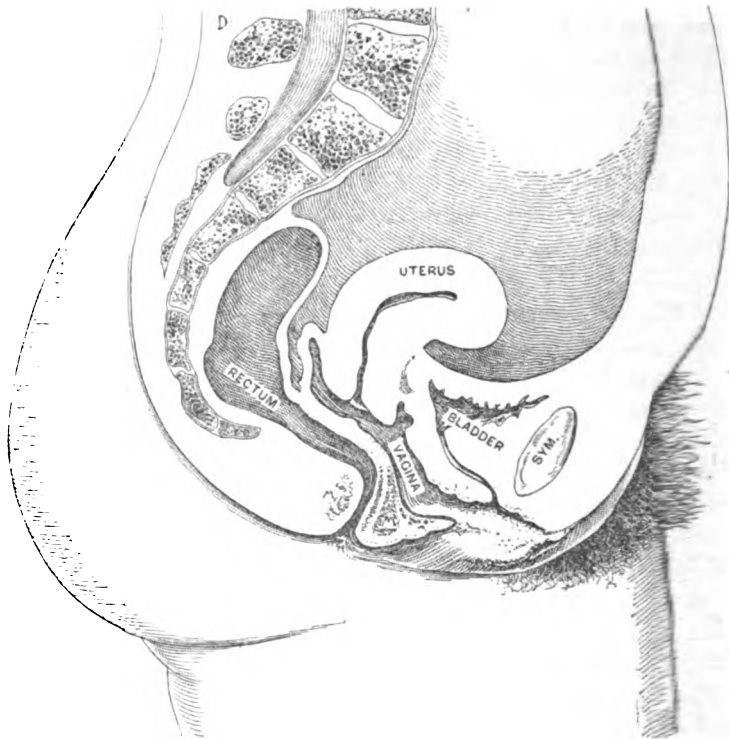


FIG. VI.

transverse or internal injury but never conceived of any method of remedying it until I heard from Emmet. It is true that by supporting the pelvic floor during convalescence from confinement, in cases in which this injury had occurred, some effort to repair the injury by natural healing processes was made, and quite successfully in some, but when the injury persisted and the usual pathological changes developed in consequence of this injury, no operation that I had ever tried was really of any service in restoring the structures. As soon as Dr. Emmet gave to the profession his discoveries in this department I saw the great importance of his valuable contribution to this branch of pelvic surgery, and I began at once to practice the operation as best I could. I have found that it meets every indication most fully in cases of transverse internal laceration in which the pelvic floor itself is in perfect condition. The operation is not adequate when the pelvic floor has sustained a subcutaneous laceration, or when atrophy has occurred in the median line from stretching, a common complication of the transverse laceration if permitted to exist for any great length of time. In these conditions I found it necessary to modify Dr. Emmet's method of operating in order to obtain the results required. Moreover, I have obtained better results by treating the so-called rectocele somewhat differently from the way in which it is treated by Dr. Emmet.

Taking it for granted that all are familiar with Dr. Emmet's operation I need only state wherein I have presumed to deviate in some particulars from his methods. In Emmet's operation we are directed to vivify the tissues up to the most prominent part of the rectocele, and then continue the vivifying upwards in the vagina on either side beyond the uppermost portion of the rectocele. No tissue is removed in the median line from the posterior commissure down towards the anus. So far as the lateral denudation in the vagina and suturing are concerned I follow the classical method. In the median line I remove only tissue enough to liberate the vaginal wall from the pelvic floor and then reflect it upwards and backwards. I then divide the tissues in the median line down to the sphincter ani muscle, or down to where I find muscular tissue and fascia; in other words, produce by incision a complete median laceration. The angles in the vagina are then brought together by the sutures down to the muscular tissue of the pelvic floor, that is, down to the bulbo-cavernosus and the ends of the transversus muscle on either side. The muscle, fascia and integument are then closed by sutures from below upwards; the enlarged vessels and cellular tissue are then crowded backwards towards the rectum

and the vaginal wall united to the floor of the pelvis with the sutures, which bring together the lateral edges of the pelvic floor.

Figure IV shows the conditions before denudation.

Figure V after denudation.

By this procedure the muscles and fascia in the median line are restored; the muscular wall of the vagina is attached to the pelvic floor as far back as the rectum and upwards to the posterior commissure. By this method the so-called rectocele is completely disposed of and the posterior wall is held downwards and backwards in its normal position; in other words, made to resume its normal relations to the pelvic floor. (See figure V).

In this way the essential requisites are obtained: first, the central part of the floor is restored; the so-called rectocele is disposed of without loss of vaginal tissue; the normal relations of the vagina and pelvic floor are established, and the overdistended veins receive more support than can be offered by any other operation known to me. The veins should not be wounded if this can possibly be avoided, either while vivifying the tissues or introducing sutures. If by chance a vein is wounded it should be excised, or the opening closed with a ligature. This guards the patient from phlebitis and extravasation. The veins can usually be avoided while suturing by separating them from the vaginal wall and pressing them downwards and backwards while passing the needle. In regard to the arteries which usually lie just beneath the vaginal wall, no harm comes from dividing them if they are ligated; in fact the closure of the arteries may be beneficial in lessening the blood supply during convalescence, thereby allowing the veins to regain their original calibre.

In regard to the treatment of prolapsus of the bladder and vaginal walls caused by injuries of the pelvic floor, especially in cases of long standing, it appears that colporrhaphy on the vagina for the purpose of correcting such lesion is as a rule unsatisfactory, as it favors the progress of atrophy and recurrence of the prolapsus. My attention was first called to this at a time when I did a large number of those operations, adopting in order the operations of Sims, Emmet, Martin of London, and Noeggerath. In watching the after-results in many of those cases I have found that atrophy of the vagina progressed with unusual rapidity and the prolapsus returned.

I believe that colporrhaphy is seldom resorted to at the present time, though it was quite in vogue a few years ago. Such treatment is unsatisfactory, excepting occasionally where in addition to the colpor-

rhaphy the injuries of the pelvic floor have been cured. In such cases the restoration of the perinæum would have accomplished the same object as well without as with the operation upon the vagina. This statement is not wholly based upon my own experience. Imperfect operating might be assigned as the cause of failure in my practice, but I have had an opportunity of examining a large number of patients operated upon by the highest surgical authorities of the age, and have found some failures among them also. At first, or immediately after operation, the success appears to be perfect, but as the atrophic changes go on in the vagina the scar tissue almost invariably gives way and the cystocele and prolapsus of the vaginal walls recur.

It is now several years that I have endeavored to relieve prolapsus of the bladder and urethra by operating to reunite the severed muscle fibres and fascia to the subpubic ligament. This principle upon which the operation is based is the same as in Dr. Emmet's operation for internal lacerations, especially related to the posterior vaginal wall, and I find that the same principle can be applied in operating for the relief of prolapsus of the anterior vaginal wall and cystocele.

A SUPPLEMENTARY PAPER UPON SUPRA-VAGINAL HYSTERECTOMY BY THE NEW METHOD, WITH REPORT OF ADDITIONAL CASES.¹

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Since I had the honor to read before this Society, at its last meeting, a paper upon "Supra-vaginal Hysterectomy Without Ligature of the Cervix in Operation for Uterine Fibroids,"² I have operated upon eighteen additional cases by the method there advocated. The results obtained from this increased experience have served to confirm my faith in the value of the operation, and cause me to reiterate the belief then expressed, that this method is the practical as well as the ideal one. In this series of eighteen cases there was one death, which, with the one death in the former series of ten cases, gives a mortality of two in

¹ Read before the American Gynæcological Society at Philadelphia, May 16, 1893.

² Transactions Amer. Gyn. Soc., vol. xvii., Amer. Jour. Obstet., Oct., 1892.

twenty-eight. But as neither of the deaths was due to the method of treating the pedicle (it is shown by the record of the cases that operation would have resulted fatally by any method), I think it may be justly claimed that the mortality of the method has been nil. This result, I think, equals, if it does not exceed, that obtained by any other operation for fibroid tumor; and as it is conceded by the most strenuous advocates of the extra-peritoneal method that a technique which permits of the safe treatment of the pedicle within the pelvis is greatly in advance of that which fixes it in the abdominal wound, it follows that the old method must be abandoned in favor of the new.

But there yet exists a controversy between this new method and total extirpation with its modifications. This still has its advocates, although they are fewer in number, and, I believe, less strongly in favor of it than formerly.

The disadvantages of total extirpation in weakening the pelvic roof in prolonged operation, and in the greater mutilation which results in shortening of the vagina, are unquestioned; and they cannot be compensated for by the supposed advantage of getting rid of an inch or two of cervical tissue. That this is recognized is shown by the fact that those who first practised total extirpation have modified the original radical method. Eastman, of Indianapolis, who is the father of this operation, in America at least, and Chrobak, of Vienna, whose work is equally commendable, and who is a close follower of Eastman, both now practice a modified form of total extirpation. They now open the vagina through the cervical canal by dilatation, the cautery knife, or some other means, thus destroying the central portion of the cervix, but leaving the vaginal attachments to the shell or outer wall of the organ intact. A glass or gauze drain is next passed through into the vagina, and the cervical tissue which remains is then sutured around and over the drainage-tube or gauze. Chrobak has named this the "Retro-peritoneal Method," and regards it as an improvement over his former method of total removal of the cervix. This technique is still faulty; first, because it opens the vagina and the way for the entrance of septic germs; second, because it destroys the cervical tissue, and thus renders drainage necessary, consequently interfering with primary union; and third, because it is wrong in principle. Drainage in abdominal surgery is a delusion. I have myself abundantly proved this, for of my last two hundred and twenty-seven abdominal sections for all forms of disease of the ovaries and Fallopian tubes, from the simplest non-adherent ovarian cyst to the worst possible form of tuba-

ovarian abscess, including hysterectomies for fibroid tumors, I have not used a drainage-tube in 2 per cent. of the cases, and the mortality has been less than 3 per cent. Now, of all abdominal operations, hysterectomy for fibroid tumor is the least likely to require drainage. Of the twenty-six recoveries in this series, drainage was not employed in a single instance, neither from above nor below, and the result proved that it was unnecessary, for there was not any, or only slight, discharge through the cervical canal, and sepsis was absent in every instance.

The technique of Dr. Polk's method, as described by him in his able paper upon "The Entire Removal of the Stump in Supra-pubic Hysterectomy," read before the Society last year, I regard as more scientific, and less apt to be attended with suppuration than either that of Eastman or Chrobak. But as total extirpation was first brought into practice because of the danger from hemorrhage and sloughing, which is always present when the cervix is treated by the old intra-peritoneal method of Schroeder, ligating it *en masse*, it also should be abandoned, since we now have a method that is secure against these dangers, and one in which the mortality is not only lower, but which has a simpler and more perfect technique. A method which removes all of the supra-vaginal tissue but does not open the vagina, permits the vaginal portion of the cervix to remain attached and in situ, to maintain its position as the keystone of the arch, and which thereby preserves the strength and anatomical shape of the lower portion of the abdominal cavity, must be superior to entire removal.

There seems to be a misconception regarding some vital points in my method which I desire to correct. There is an impression that I am indifferent as to whether the raw end of the cervix is covered or not. A careful reading of the following quotation from the original paper will show that this is a mistake: "The cervix being now released, it immediately recedes and is drawn deeply into the pelvis by the retractive and elastic properties of the vagina, where it is buried out of sight by the peritoneal flaps covering it. These flaps have been rendered so taut by the ligatures which have been placed, that usually, as the cervix recedes into the pelvis, they close over it like elastic bands. The cervix is now in its natural position, and *without a ligature or suture in its tissues*. The operation is finished by infolding the edges of the peritoneal flaps, which may be secured by Lembert sutures, if necessary. I have not found this necessary if the ligatures which secured the uterine arteries had also grasped the folds of the broad

ligaments, for this so tightens them that the two sides are brought forcibly together when the cervix is drawn under."

Of course, the operator must be guided by circumstances, both in the control of hemorrhage and the number of sutures required to cover the raw surfaces. If for any reason the flaps are not brought forcibly together, and do not remain closely in contact when the cervix is released, I place sutures enough to accomplish this purpose. I do not, however, as a routine practice, whip the edges together with many sutures, first because I have not found it necessary; and secondly, because I believe the less interference by sutures and drainage-tubes the more perfect will be the result. Read, for instance Case II. of the original paper. The tumor, a very large one, was entirely subperitoneal, and had dissected its way between the folds of the broad ligament, and lifted the entire peritoneum upward, carrying, of course, the colon with it. It was necessary to enucleate the entire tumor, and when the large pelvic portion was brought up, a mass of veins was uncovered, and an immense vascular cavity resulted. After ligating the arteries it was necessary to apply many ligatures to the veins, and afterward, in adjusting the peritoneum over the cavity which was made, many sutures were necessary.

A further misconception relates to the management of the cervical canal. In the original will be found these words: "*Nothing whatever is done to the cervical canal.*" To emphasize still further, I would state that the viscid plug of mucus, which Nature has provided for the purpose of preventing the entrance of septic material from the vagina, is not even disturbed. The cervix must be left absolutely alone before, during, and after the operation, if it is healthy. If the cervix is not in a healthy state, the case is not one for operation by this method, and total extirpation should then be the operation of election.

It is these two cardinal features, namely, that the cervix is left *without a ligature or suture in its tissues*, and that *nothing whatever is done to the cervical canal*, which makes this operation differ in principle from any other, and to which, doubtless, is due the rapid recovery of the patients without hemorrhage or sepsis.

I also desire to call attention to the method of Drs. Goffe and Dudley for the purpose of correcting a mistake on their part regarding the principle of my operation. Dr. Dudley, in his discussion at the last meeting, called this operation a modification of the Goffe-Dudley method, whereas the two methods are totally unlike both

in principle and practice. Their operation must be placed in the class of strangulation methods because it encircles the cervix with a ligature, differing only from the method of Schroeder in that the ligature is placed beneath the peritoneal flaps if it is possible to do this. When it is recalled that the principle of my operation is that the cervix shall be left entirely free, it is easy to see that the two operations are totally different. Note also the difference in the post-operative behavior of the cases operated by the two methods. In all of the cases reported by the Goffe-Dudley method there were elevation of the temperature and other evidences that suppuration was taking place, which indeed the operator expected. The patient was then placed in position, and the cervical canal dilated for the purpose of permitting the pus to escape. This I would regard as a dangerous procedure, and the necessity for it should be enough to condemn the method when there is a better way.

To recapitulate: the vital principles in supra-vaginal hysterectomy are first, control of hemorrhage by ligature of the bloodvessels in the broad ligaments; second, non-constriction of the cervical tissues, so that there shall be no cause for suppuration, and third, non-disturbance of the cervical canal, so that sepsis from the vagina may be prevented. We attain the ideal in surgery only when we secure primary union without suppuration.

I believe more than ever in the advisability of early operation in fibroid tumor. To wait for the menopause to cure is to doom the patient to years of unnecessary suffering, and to delay which is often fatal. The menopause does not cure; on the contrary, it seems to stimulate growth in some cases. And even in those rare instances where the tumors do decrease in size, malignant changes often occur. More than one-half of the cases of this series had reached or passed the age of the menopause at the time of the operation, and all of them had urgent symptoms. I will record the following cases as examples:

Case XIII. Multiple fibroid tumor, in which malignant degeneration developed four years after the menopause; hysterectomy. R. B., aged fifty-five years; puberty at thirteen; married; three children, youngest nineteen years; four miscarriages since birth of last child; menopause four years ago.

I first saw this patient on October 1, 1892, when the following history was obtained: About eighteen months previously she began to suffer from attacks of cramp-like pains (uterine colic?) commencing in the afternoon about two o'clock, and continuing through

the night, when they would subside, and recur again about the same hour in the afternoon of the next day. The pain increased in severity, and was attended with a slight discharge of blood from the uterus. Morphia in large doses was required to give relief. This periodical feature of the case was one of interesting and puzzling character. During the previous six months she had lost flesh rapidly; she was anæmic, but not cachetic.

Examination showed the cervix uteri normal, but the body of the uterus was as large as the doubled fist, and nodular; the cavity of the uterus was large, and seemed to contain a growth; there had not been any leucorrhœal discharge of consequence, and there was not any odor. Inquiry brought out a history of profuse bleeding until the menopause.

I expressed the opinion that the uterus was the seat of several fibroid tumors, which were probably undergoing malignant change, although post-menopausal atrophy had taken place. Operation was advised, but the patient strenuously objected, and I did not see her again for six weeks. In the meantime the symptoms had increased, and she was now anxious for surgical interference.

Operation, November 17, 1892. After anæsthesia careful examination was made for the purpose of deciding upon the operative procedure best adapted to the case. The uterus and tumors were found to be too large for vaginal hysterectomy; moreover, the cervix appeared to be entirely healthy. I therefore determined to make the supra-vaginal operation; but as a further means of diagnosis, and for the purpose of disinfecting the uterine cavity, I irrigated and then passed a curette and scraped the surface. While doing this a hemorrhage of such great and sudden quantity occurred as to appear alarming; the blood actually poured out of the cervical canal in a stream. I quickly packed the uterine cavity and the vagina with iodoform-gauze, and immediately proceeded with the cœliotomy. After great difficulty the tumor mass was separated from adhesions and brought up. The broad ligaments were short, making manipulation quite difficult; I, however, succeeded in making deep amputation of the cervix, stitching the peritoneal flaps over the raw surface. The cervical stump appeared to be entirely normal. The patient recovered, and went home just three weeks after the operation.

This is the only instance in which I irrigated and curetted the uterus, or even the cervical canal, by way of preparation for the hysterectomy, and I regard this measure as unnecessary and harmful, as a rule. It certainly was in this case.

Examination of the specimen showed the uterus to contain a number of fibroids, one of which occupied the uterine cavity and had a sessile attachment. It was quite friable, and appeared macroscopically to be undergoing cancerous degeneration. It was the breaking down of this tumor with the curette which had caused the hemorrhage.

Several months ago I was consulted by a woman, sixty-five years of age, who informed me that she had had a tumor before the "change of life," which had occurred at forty-seven years, but that it then diminished in size, and almost disappeared. She had been comparatively well until two years ago. She then began to have a watery, irritating discharge from the vagina, which was later tinged with blood; at times there had been quite a free bleeding. She had not lost flesh, but had become weak and cachetic-looking. She did not suffer much pain, and consulted me on account of the hemorrhage. The cervix uteri was small, but the os was quite patulous; the body of the uterus was large and irregular in shape. The broad ligaments appeared to be distended by hard nodular masses. I made a diagnosis of malignant degeneration of an old fibroid tumor, and gave an unfavorable prognosis because of broad ligament involvement. She was anxious for operation, however, and I made an exploratory incision, but the pelvic condition was such as not to permit of a successful removal of the disease.

These two cases show that although the menopause may have been reached and safely passed, and the tumor have apparently disappeared, there is still the danger that it may undergo malignant change, because of the low vitality of its tissues.

Such cases as the above, with others that I could relate, have convinced me that the mere removal of the ovaries and tubes for fibroid tumor is an operation which should be abandoned in favor of hysterectomy. The former operation leaves the diseased uterus and tumors, and it as often fails to cure as does the natural menopause. Indeed, I believe that supra-vaginal hysterectomy should be made in all cases when the ovaries and tubes are being removed for disease of these organs, even if the uterus is only slightly enlarged. The now useless uterine body, with its diseased endometrium, would then be out of the way, and the patient would be saved the months of suffering usually required to bring about involution of the uterus. I have acted upon this reasoning in a number of instances with the happiest results. By the method which I advocate, hysterectomy is safer than simple

oöphorectomy, and it is more thorough. The following case is introduced as a good example:

Miss R. was sent to me in August, 1891. She was forty-three years of age. Ten years previously she began to suffer from metrorrhagia, with pain; both pain and hemorrhage had increased in severity, and during the last two years she had great pain in the left ovarian region, at times excruciating. She had lost considerable flesh, and presented an anæmic appearance.

Examination showed the uterus to be enlarged and to contain several subperitoneal fibroid tumors the size of an egg, and smaller. To the left of the uterus, and posterior to the broad ligament, a mass the size of a duck's egg was found. This mass was firmly fixed, and tender on pressure, and was thought to be an enlarged ovary. The right side was similarly affected, but in a much less degree. Laparotomy was advised, and she entered my private hospital for the purpose.

Operation, September, 1891. A large ovarian hæmatoma on the left, and a smaller one on the right side, were separated from dense adhesions and removed. I did not consider hysterectomy necessary at this time, for having removed the diseased appendages, I hoped the fibroids would disappear.

She made a good recovery, and went home within four weeks. The pain and hemorrhage were absent during the next five months, but she did not regain the lost weight. At this time bleeding began again and she rapidly became more reduced. Examination showed that the fibroid tumors had continued to grow and now filled the pelvis, extending into the hypogastrium; pain also had returned. The patient was very anxious for a radical operation which might give her relief, and hysterectomy was then performed. She made another good but slow recovery, and remains well.

I have performed oöphorectomy upon many cases in which the result has been finally satisfactory, but what I wish to enforce is, that the patients are not so immediately relieved as where hysterectomy is done instead of simply removing the appendages. The following cases are good illustrations:

Case XIV. Multiple fibroid degeneration of the uterus; hysterectomy. Miss B., aged twenty-eight years, single; puberty at fourteen years. Enjoyed good health until five years ago, when she began to suffer from dysmenorrhœa, congestive in character, and to manifest nervous symptoms. The menstrual flow was scanty and there had not been at any time menorrhagia. The symptoms gradually increased in

severity, the dysmenorrhœa becoming ovarian in character. Two years ago she was in a condition of extreme nervous exhaustion. She then underwent a course of treatment and afterward (eighteen months ago) the operation of dilatation of the cervical canal. Her general condition was improved for a time, but the pelvic symptoms grew worse.

I first saw her in October, 1892. She was then quite anæmic in appearance, exceedingly nervous and very anxious about her condition. She complained of severe pelvic distress and throbbing pain in the left ovarian region. She stated that menstruation was very "distressing, rather than painful," the flow being slight in quantity. The subjective symptoms seemed to be more general than local, yet the patient, a very intelligent woman, "was sure there was something radically wrong in the genital system."

Examination showed the cervix uteri of normal size, but the os was small. The uterine body was several times larger than the normal, and very hard and nodular. On the left side of the organ there was an egg-sized tumor, which at first appeared to be either the enlarged tube or ovary, being somewhat the shape of the latter; but it was most closely connected with and seemed to be one with the uterus.

Diagnosis. Fibrous degeneration of the uterus with probable disease of the appendages.

The patient had had intelligent medical attendance extending over a period of two years, and all remedies had been exhausted. I, therefore, at the request of the patient and her physician, decided to perform coeliotomy.

Operation, November 19, 1892. The uterus was found to be the seat of numberless fibroid tumors, from the size of a hen's egg down to a pea, giving it a peculiar hob-nailed appearance. The veins of the broad ligaments were greatly distended. The ovaries and tubes were comparatively healthy. It was at once decided that the removal of the appendages in this case would be useless, and that hysterectomy should be made. This was done by the supra-vaginal method. The patient made an uninterrupted recovery—the temperature at no time reaching 100°.

Examination of the specimen shows it to be one of great interest because of the peculiar nodular character of the uterine growth, and the white, non-vascular condition of the tissues.

Case XV. Multinodular uterine fibroid with deep broad ligament attachment, attended with great hemorrhage caused by two intra-uterine submucous tumors; hysterectomy.

J. C., aged forty-one years; single; puberty at fourteen. Enjoyed good health until about six years ago, when she began to suffer from menorrhagia. The flow gradually increased in quantity until it became so excessive (about three years ago) that she was compelled to seek advice. At this time she also began to lose flesh, and to show evidence of heart failure, doubtless due to anæmia.

The treatment during the three years before I saw the patient consisted of the usual internal remedies, together with massage and electricity. She continued to grow worse, the loss of blood being "frightful" in quantity. It finally occurred about every two weeks, and continued usually two weeks in decreasing amount. The hemorrhage would begin with a sudden gush, preceded by an expulsive pain. She was in bed two weeks every month. She was brought to me in November, 1892, in an extremely anæmic and emaciated condition.

Examination. The hypogastrium and the lower right side of the abdomen were occupied by a hard, elongated, irregular tumor, which extended from above the umbilicus into the pelvis, where it was connected with other irregular hard masses. It was mobile above, but fixed below.

Per vaginam, the cervix was found high up toward the left iliac fossa. The lower pelvis was occupied by a multinodular tumor which appeared to be fixed. By combined touch, the pelvic tumor was shown to be connected with the abdominal growths.

Diagnosis. Multiple fibroma of the uterus, with deep broad ligament location. She entered my private hospital.

Operation, December 3, 1892. The upper portion of the tumor was found to be free from adhesions, but the lower right portion was deeply seated within the broad ligament. The upper portion was peculiar in shape—elongated like the shell of a rifle cannon, but quite nodular. This portion of the tumor was readily brought through the incision, but the pelvic portion required enucleation before it could be made to emerge. Considerable difficulty was encountered in placing the ligatures because of the deep location of the tumor. This was finally accomplished, however, and the tumor and uterus removed. One suture served to secure the peritoneal flaps. The patient was convalescent from the beginning, and went home four weeks after the operation.

The specimen is interesting, because it shows the extensive attachment which it sustained to the broad ligament, and how very small the

cervix was after the amputation of a tumor which seemed to have a thick pedicle. The cervical canal at the point of amputation is very small, probably accounting for the tenesmic pain and sudden flow at the onset of each hemorrhage. The cause of the excessive bleeding is also shown in the presence of the two large submucous tumors. The depth of the uterine cavity is four inches, and shows the posterior wall of the uterus to be very thin. The submucous tumors occupy the anterior wall. The cavity is large and the mucous membrane spongy. I think it would be possible to count fifty tumors in the entire mass. The Fallopian tubes were healthy. The right ovary was cystic, and as large as a hen's egg.

Case XX. Multiple uterine fibroid incarcerated in the pelvis; hysterectomy. M. D., aged twenty-eight years; single. She had suffered for several years from symptoms of congestion of the uterus, dysmenorrhœa and menorrhagia. The symptoms had been increasing, and in the fall of last year she was compelled to cease work. In November and December she was very ill with what Dr. Howard, her physician, diagnosticated as pelvic peritonitis, associated with fibroid tumor of the uterus. She slowly recovered from this attack, and soon afterward I saw her. She was emaciated, anæmic, and presented an appearance of great suffering. She was then in the midst of an attack of profuse metrorrhagia. She complained of great pressure upon the bladder and deep in the pelvis. She had pain extending from the sacral region down, along the distribution of the sacral nerves, and this caused extreme lameness at times.

Examination showed the pelvis packed with a hard irregular tumor, which extended into the hypogastrium. The cervix was almost out of reach above the symphysis pubis. The whole mass was immovably fixed.

Diagnosis. Multinodular fibroid tumor of the uterus, incarcerated and fixed in the pelvis by its size and by inflammatory adhesions. I advised operation, and she entered the Polyclinic Hospital.

Operation, February 9, 1893, in the presence of a number of invited guests and the class of the Polyclinic. The upper lobe of the tumor was found closely glued to the surrounding organs, intestines, and omentum. After separation of the adhesions, it was made to emerge through the incision. The ovaries and tubes were next dissected from their adhesions, and then the greatest difficulty of all occurred, the delivery of the pelvic tumor. It was so firmly fixed by adhesions, and from its size, that it required great traction, which

resembled very much the forceps delivery of an impacted head. Finally, after great effort, in which my heavy volcellum forceps proved its worth, the tumor was brought up, leaving a great hole between the rectum and vagina, which seemed to extend almost to the vaginal orifice. The adhesions to the rectum were so dense that it was remarkable that wounding of the bowel did not result from the necessary manipulation.

A good deal of hemorrhage occurred from lacerated veins, but it soon subsided to sponge pressure. The ligatures were next applied and the cervix amputated. The sponges were then removed, and the abdominal cavity closed without irrigation or drainage.

The patient stood the operation well, and made a very rapid recovery without the slightest symptom, going home seventeen days afterward.

Case XXIII. Multiple fibroid tumor of the uterus, complicated with double tubo-ovarian abscess and septicæmia. G. J., aged twenty-seven years; puberty at fourteen; widow; one child, twelve years old.

This patient was brought into the Polyclinic Hospital in a low, septic condition, and was said to be suffering from ischio rectal abscess. She had been very ill for several months; her temperature ranged from 101° to 103° in the evening, and she had rigors and sweating. Pulse 130-150. She was placed in the care of Dr. Adler, who examined her under ether, and determined that she had a deep-seated pelvic abscess (not ischio-rectal) and transferred her to my service.

Examination revealed a semi-fluctuating mass directly within the vaginal orifice, and apparently between the vagina and the rectum. The swelling extended into the post-uterine region. The cervix uteri occupied a position high up behind the symphysis of the pubis. The post-uterine pelvic space was filled with irregular, semi-fluctuating tumors. The hypogastrium was distended, and palpation revealed several hard tumors, which seemed to be connected with the uterus. Everything was firmly fixed. The patient's condition scarcely warranted operative interference, but there did not appear to be any hope for improvement. To add to the unfavorable outlook, she was said to be a chronic inebriate.

Operation, April 19, 1893. Coeliotomy revealed about the worst possible condition. The uterus and several fibroid tumors, with the bladder drawn up over them, were found directly under the incision. The omentum and intestines were surrounding and adhering to large ovarian and tubal abscesses which occupied the entire pelvic cavity.

The tissues looked almost gangrenous, and there was some loose semi-purulent fluid in the spaces between the tumors. I found a point of cleavage, and at once began separating adhesions. Deep down in the left side of the pelvis, between the rectum and the vagina, and under the sigmoid flexure, I found the left appendages surrounded by and containing a large quantity of fetid pus. The sac had ruptured. After the loose pus was washed out, the abscess sac—tube and ovary—was brought up and removed. Irrigation was continued until the water returned clear. I now began searching for the right appendages, which I believed to be involved in or to constitute the recto-vaginal tumor. After continuing the dissection, scarcely knowing which was tumor and which was bowel, I opened into an abscess cavity, and more fetid pus was emptied into the pelvis. This abscess was found to be so deeply located that the lining membrane only was removed. I then proceeded to complete the operation by removal of the uterus and fibroid tumors by the supra-vaginal method.

After further irrigation the abdomen was closed without drainage, the operation having lasted an hour and a half. I felt convinced that this case would result fatally, but, thanks to the untiring efforts and intelligent care of Dr. Erck, the Resident in charge, she made an excellent recovery.

To simply remove the appendages in cases such as these is to invite defeat.

They also teach the lesson that operation whilst the tumors and patient are both in good condition would save much suffering and danger to life, as well as serious labor for the surgeon.

Case XXVIII. Large sub-peritoneal sessile fibroid tumor of the uterus, complicated with chronic parenchymatous nephritis; hysterectomy; death from suppression of urine in thirty hours.

H. R., aged forty-eight years; puberty at thirteen; married twenty-four years; one child, twenty-three years old; labor normal. Menses had always been regular, lasting from four to six days, until about a year ago; since then had been less regular, and flow less in quantity.

Twelve years ago she first discovered a "lump" in the hypogastrium. This "lump" grew rapidly, and within a year the abdomen was as large as at the full term of gestation. Her family physician at first thought she might be pregnant, and watched the case closely until after the ninth month, when he pronounced the growth a tumor. She was advised by several physicians whom she consulted to wait for the menopause. She took medicine regularly for six years, but without benefit.

During the last six months the tumor had been growing constantly. She also suffered from frequent attacks of severe pain in the lumbar region, supposed to be the result of "kidney trouble." On several occasions she had been confined to bed a number of weeks in consequence of these attacks. She voided urine quite frequently, but only in small quantity. It was of high color and strong odor.

During the past year she had been losing flesh and strength, and had become quite nervous; was compelled to lie down much of the day, and slept a good deal.

Examination. The abdomen was distended to the size of the full term of gestation. Palpation revealed a semi-solid, obscurely fluctuating, smooth mass as large as the uterus at full term. It occupied a position quite high up in the abdomen, was bi-lobed and mobile above, but fixed below. The cervix was far back and above the superior strait; it could not be easily reached by the finger.

Diagnosis. Fibroid tumor of the uterus, probably undergoing malignant degeneration.

Operation, April 15, 1893. An incision of four inches exposed the tumor. It was very vascular and friable looking. Its upper portion was free from adhesions, but below it had a broad attachment. The incision was then extended, and after great effort the tumor was lifted from its bed in the abdominal cavity. It was now seen that the major portion of the tumor was located within the folds of the left broad ligament. The uterus was with difficulty located; it was quite small, and occupied a position on the surface of the posterior and right side of the growth. The tumor had grown from the left anterior surface of the uterus, expanding the folds of the broad ligament, having a sessile attachment. The veins of the broad ligament were as large as the thumb, giving a dark and formidable appearance to the field of operation.

The operation was concluded with difficulty, but it was not unduly prolonged, considering its character; however, the patient showed evidence of shock, although hemorrhage had been slight and principally venous. The peritoneum was stitched carefully over the stump of the cervix, and the opened broad ligament closed with many sutures.

An hour after the operation the patient seemed to be comatose. It was difficult to arouse her. Stimulants were administered, but without effect, and four hours afterward the breath had a urinous odor. A catheter was passed, and the bladder found empty.

I now realized that the coma was due to uræmia from suppression of urine. Remedies were used with the hope of restoring the action of the kidneys, but the patient continued to grow worse, and died thirty hours after the operation. The odor of the breath had become almost like that of urine.

Post-mortem. The pedicle was found in good condition. There was not the slightest evidence of inflammation about it or in the abdominal cavity. Examination of the kidneys explained the cause of death. They were hypertrophied to about three times their normal size, and apparently in a waxy condition. The ureters were traced to their entrance into the bladder, and were found free from injury. One of the kidneys was sent to Prof. John Guiteras, whose report follows :

"The kidney presents the lesions of chronic parenchymatous inflammation, together with a desquamation of epithelium from the convoluted tubules, and a proliferation of the remaining cells, which must indicate an acute exacerbation of abrupt termination."

The death in this case was undoubtedly due to the kidney lesion, which in turn was probably due to long pressure from the tumor. Of course, the operation hastened the inevitable termination.

The result speaks with telling force against delay in operation and the teaching that the menopause influences these cases in atrophy of the tumor.

[NOTE.—Since the reading of this paper I have operated upon nine other cases by this method. They all recovered without event.]

THE PREVENTION OF PUERPERAL SEPTICÆMIA.

BY WALTER B. CHASE, M. D.,

Brooklyn, N. Y.

The history of puerperal septicæmia is one of the most interesting and important in gynecic literature.

This is necessarily so, from the universal liability to its ravages and the suffering and mortality it occasions. The record it has made in lying-in-hospital and in private practice is appalling, and a proper study as to its prevention, involves some consideration of its causes. The facts concerning its genesis were long delayed, but the researches of modern pathology has portrayed it in its proper relations, and the clear light of to-day regarding its ætiology is in marked contrast with the suppositions, crude speculations, and erroneous opinions, which have held sway until within the last two decades. This uncertainty has been dissipated by the promulgation and demonstration of the truth of the germ theory of zymotic disease. Fifty years ago in Philadelphia, there occurred in the practice of Dr. Rutter, a series of cases of puerperal fever, which left on the minds of the medical profession a conviction of the communicability of this disease through contact. It would be interesting to examine the theories and views of such names as Eismann, Simpson, Semmelweis, Koch, Virchow, Pasteur, Winkel, Orth, Haussman, Hewitt and others of Europe, and Holmes, Barker, Lusk, Thomas Harris, Garrigues and others of the U. S., and trace the successive steps which led up to the discoveries with which the obstetrician is now familiar, which we may justly regard as one of the crowning glories of scientific and pathological investigation; but the limits of this paper will only allow reference to them incidentally. The efforts of Semmelweis to connect the manifestations of puerperal septicæmia with poison from the dissecting room, increased the desire for an authenticative solution of the question, while in the same connection Lusk satisfied himself that personal disinfection removed the risk of such infection, and gives emphasis to the views of to-day, that puerperal septicæmia is a preventible disease. General pathological research along these lines has contributed to the demonstration of the true cause of this disease. The term puerperal septicæmia, as here used, includes the several conditions known as puerperal fever, and

embraces the manifestations of the puerperal state under the head of pelvic lymphangitis, cellulitis, peritonitis and peri- and parametretic inflammation, though it is not to be inferred that all forms of fever or pelvic inflammation during the puerperal period, are necessarily of such origin.

One peculiarity of puerperal septicæmia is that the constitutional disturbance is to a considerable degree independent of the extent and severity of the initial lesion, and that cases where the initial lesion is the most insignificant, the sepsis is sometimes the most severe and prolonged.

The most violent and protracted case of acute puerperal septicæmia I ever saw, in which recovery followed, was of this character. The case was extremely difficult of differentiation and it was only after several days had elapsed, and repeated examinations had been made, that a minute area of thickening no larger than a dime was found in the right broad ligament. Among its various manifestations Garrigues mentions a rare form, which he describes as acute septicæmia, which results from the absorption of a poison of such extreme virulence as to overwhelm the system and death ensues from paralysis of the heart before sufficient time has elapsed for the appearance of visceral complications. Naturally efforts have been made and means adopted to prevent the developments of this disease, and with varying results. Since the days of anti-septics and aseptics much has been accomplished in this direction, and the results both in hospital and private practice, are to a large degree gratifying, but perfection has not yet been attained. Of this there is certainty, that antiseptic measures *alone* are not always availing. The results of such treatment have been reported by Jewett in the lying-in-ward of the Long Island College Hospital and his careful and scientific observations are both suggestive and instructive. To ascertain the relative results of antiseptic vaginal douching two parallel series of hospital cases were treated side by side. The disinfectant was administered twice daily during the post partum week. The thermometric lines were as follows: About seventy per cent. of the cases in which the douch was used the temperature did not exceed 99 5-10, while in all the cases in which the douch was not used the temperature was constantly below 95 5-10, so that the morbidity was less in the cases not interfered with. Jewett then stated (in 1884) that he had been compelled to relax his faith in the protective power of local antiseptic measures, both in puerperal and non-puerperal patient, and declares his belief, that they cannot be relied upon to procure immunity

in the presence of septic surroundings, and that experience "emphasizes the importance of *aseptic* rather than antiseptic management of the patient." In a recent paper Garrigues refers in emphatic terms to reprehensible and unnecessary antiseptics, in midwifery, and after raising the question as to the propriety of giving antiseptic vaginal injection before labor, expresses his approval of using it only once, and not subsequent to labor, unless it had been necessary to introduce the hand into the uterus. He recommends a one per cent. solution of creolin, which is innoxious, antiseptic and lubricant. The conditions under which puerperal septicæmia develops are very diverse.

Sometimes it is apparently epidemic: I say apparently for it is difficult if not impossible to demonstrate that it is not transmitted by the obstetrician or midwife (except in infected surroundings) for it is certainly much more prevalent some years than others. Again Lusk points out the fact it is much more prevalent in the cold than the warm season. Certain localities in country places so far as known are exempt from it. During a term of thirteen years' observation in the interior of New York and Pennsylvania the writer of this paper never saw or heard of a single case of puerperal septicæmia and in many locations so far as can be ascertained it has never prevailed. This of course refers to typical acute cases. Some country practitioners, and I fear some of their city brethren, have no fear of the dread disease and consequently no strict antiseptic measures are adopted as a preventive, and in many localities in the country some believe none are required. No compunctions of conscience deter some of these practitioners from going from a case of erysipelas, diphtheria or scarlet fever, directly to the case of the parturient woman, though it is not to be supposed that this is of frequent occurrence. The inference seems positive that the conditions are unfavorable for germ development or else the germs are absent—hence the immunity. Certainly no practitioner in any of the thickly populated centers, with knowledge and conscience would venture to take such a risk. The diversity of views and consequent diversity of practice which followed the teaching of ten years ago have doubtless very largely grown out of the belief that the phenomena of labor was not altogether physiological, but that the rules which should govern its management were largely those accepted in surgical procedures. I shall enter into no argument to prove the fallacy of such a theory, and shall assume that normal labor is a physiological process, and that so far as septic infection is concerned, it is with few exceptions due to external causes. The belief became fixed that

the danger could be obviated by antiseptic measures directed to the maternal parts by douching, etc. So firm was this notion rooted in the professional mind, that this procedure became the keystone of their faith and practice, and this view is yet held but by diminishing numbers.

Thus immunity from the septic state—post partem, was regarded as due more to the thoroughness of such preventive measures, than the varying power of resistance to the poison by different individuals, or the avoidance of sepsis. The reaction from the fallacy of such views, made possible by a fuller understanding of bacteriology as related to the pathology and etiology of the disease, has opened the way to more rational and physiological methods of preventive treatment. It may then be confidentially affirmed that as healthy animal tissues contain no bacteria, puerperal septicæmia is caused by the introduction into the genital tract of specific micro-organisms, their multiplication and the absorption of such germs with their products, ptomaines and leucomaines into the blood of the patient. It is also demonstrated that these various micro-organisms are capable of culture, and that these cultures retain the same septic qualities as the original germs. In order of frequency and virulence they may be classified in the following order: First, streptococcus pyogenes—which is Fehleisens diplococcus of erysipelas. Second, staphylococcus pyogenes aureus found in ordinary pus. Third, staphylococcus pyogenes albus. Fourth, staphylococcus pyogenes citreus. Fifth, possibly bacillus pyocyneus and other bacilli. It also appears that these germs propagate rapidly in alkaline media, and it is believed after having found entrance to the genital tract, they only enter the system through a denuded mucous membrane or raw surfaces. In septicæmia pure and simple, the constitutional disturbance results, principally, though not necessarily entirely, from absorption of ptomaines and leucomaines, pyemia supervenes when these bacteria enter the blood, having found entrance to the veins, and thus distributed through the circulation, and whenever arrested produce new foci of suppuration and distribution. The methods of infection may be classified as external and internal, though in strict terms it may be declared that all pyogenic micro-organisms are from outside the system, and that true auto-infection never occurs.

First—Entrance may be gained by germs on the hands of the attendant introduced into the vagina or uterus. Second—germs from clothing of patients or from other substances coming in contact with the patient, thus gaining entrance to the vagina, and third

—entrance of air containing germs into the vagina and uterus—accidentally or otherwise, at, preceding, or subsequent to labor. Observation and experience confirms the belief that outside of lying-in-hospitals and infected apartments the most common source is from the finger or hand of the attendant during labor. The darkest pages of obstetric literature are those which record the spread of this disease in the practice of a single physician as traced from one patient to another. It was by such observations that the causes of its dissemination were established before its specific nature was known. Doubtless to-day, as in the past, the principal citadel and magazine of this poison is found on the hands of the obstetrician or on his instruments.

The remedy for this danger is simple and obvious. Not that cleanliness which would enable one person to say of another that his or her hands were not dirty, nor the conventional cleanliness which comes from ordinary washing with soap and water, but *surgical cleanliness*, which comes only from thorough use of soap and brush, followed by *suitable immersion of the hands for a proper period in a true germicide solution*—say 1 to 2,000 of bichloride of mercury.¹ That immunity from this disease was present even after less careful attention to such details should not be taken as an argument that they are not required, neither should it be inferred that failure to comply with them did not subject the patient to needless and culpable risk. Here pre-eminently the moral element which is reasonably presumed to enter into every professional act of the physician, surgeon, or accoucheur, should never be wanting. In these rules² of asepsis it should be insisted upon that all instruments and accessories which come in contact with the patient should be rendered aseptic, either by immersion in true germicidal solutions, or by the employment of dry or moist heat, and this rule should apply to the entire period of treatment be it longer or shorter. The clothing and apartments should be free from the suspicion of contamination.

As an accessory to the risk of puerperal infection the frequent examination of the patient per vagina during labor is greatly to be feared, and if suitable knowledge of the case has been obtained

¹ The germicides recommended for personal disinfections of hands would be (after thorough washing and scrubbing with soap and brush), solutions of Bichloride and BiI Iodide of Mercury, Acid Carbolic, Chlorinated Soda and Peroxyde of Hydrogen.

² These rules and suggestions relate particularly to the management of private cases, as the author has had no personal experience with lying-in-hospitals.

prior to this period the advantages will be obvious. Not only will no good be thereby attained, but a needless element of danger will be introduced into the case. The ideal confinement is the one in which there is such perfect relation between the relative size of the foetal head, the diameters and condition of the maternal parts, the presentation and the adjustment of the vital forces, that labor is completed without any interference on the part of the attendant. The wise and beautiful provision nature had made to protect the parturient women at this juncture of her existence, should not be forgotten or ignored.

It must be remembered and insisted upon that normal labor in all that antedates and succeeds it, is a physiological process and that when this process is interfered with by some unnatural cause, trouble may ensue.

One of the physiological processes so vital to the safety of the parturient state is drainage. Any deviation from its normal causes and duration, whether of mechanical, inflammatory or septic origin, is attended with risk, and should not be chargeable to any neglect of proper preventive measures. The dangers of the puerperal state would be vastly lessened in proportion as "meddlesome midwifery" diminishes.

If ever the old adage has weight and significance "that an ounce of preventive is better than a pound of cure," it is in the domain of midwifery.

The question as to the propriety of antiseptic vaginal douching, immediately preceding, during and subsequent to labor, which has long vexed the profession, is fast finding a solution. Except in cases of complication requiring instrumental or manual interference, as before referred to, and to another class of cases which will be mentioned later on, the consensus of opinion is adverse to its use.

Such use of antiseptics, beyond cleansing the external genitalia, is of doubtful expediency and an admission of our own distrust of nature and her wise arrangements and safeguards. The end sought, immunity from sepsis, will be best attained by aseptic rather than antiseptic methods.

There is, however, a class of cases, in which the patient is not in a physiological condition, which requires radically different management, viz:—Those in which the patient is already infected, having within it the tubes, uterus, vagina or in adjacent structure, directly connected therewith, specific, suppurative or malignant disease.

Under this head may be mentioned gonorrhœal poison, found any where from the introitus vagina to the free opening of the Fallopian tubes, suppurative disease of one or the other of the tubes emptying their contents into the uterus, or occasionally into the peritoneal cavity, or malignant disease of uterus, adnexa and of the vagina, accidental entrance of other poisons having their lodgement in the vagina, peri- and para-metritis, pus cavities communicating with the genital tract, and the various vesico-vaginal, recto-vaginal and other fistulæ, for it must not be forgotten that such conditions do not necessarily preclude conception. The recognition of such complications, prior to accouchment, is of the highest importance, and if overlooked serious and perhaps avoidable consequences may ensue. When sepsis after confinement is present, the question as to its genesis may be in doubt. If anti-partem examination was neglected and the attendant may reproach himself unjustly in presuming he was the carrier of the poison, without being able to prove or disapprove the ground of his suspicions.

So, too, such lack of positive knowledge will serve as an embarrassment in formulating and carrying into active employment rational and correct measures of treatment. While positive knowledge as to the method of invasion may not in all cases be a *sine-qua-non* to successful management, yet failure to observe such facts when the condition was due to causes within the patient, might and probably would defeat the end sought. The presence within the genital tract of disease may usually be predicted by the reaction of the secretions found in vagina. In the normal state the secretion of the vagina is acid and that of the uterus alkaline. If such secretion found in the vagina be alkaline or faintly acid in its reaction the presence of pathogenic germs may be inferred and appropriate treatment instituted. If such disease be found, either specific inflammatory or suppurative, during pregnancy it should receive prompt attention, and failure to do so might invite serious post partem trouble. If the disease be confined to vaginal walls treatment on chemical suggestions might be indicated, in which event solutions of lactic acid or boracic acid in appropriate strength would fulfill the indication, yet the difficulty of destroying certain micro-organisms in the vagina—particularly the gonococcus—must be acknowledged. Here, as elsewhere, the microscope may be of highest value in determining the exact character of the disease process. Again it is affirmed by experienced obstetrical teachers that the introduction of an aseptic finger into the vagina during labor may carry germs found in a normal acid secretion of the vagina, to the alkaline secretion of the cervix, and

that these germs may there develop and be productive of mischief, and the statistics of labors conducted without such examinations add weight to the assertion.

There are two rules as to the avoidance of puerperal septicæmia which should command universal assent:

First—A proper regard to nature and her laws as seen in normal parturition, and

Second—A rigid adherence to *strict asepsis*.

SUPRA-VAGINAL HYSTERECTOMY FOR FIBROID. WITH SPECIMEN.¹

BY H. G. WETHERILL, M. D.

Trenton, N. J.

This operation is not a rare one in the great medical centres of this country but it is always an interesting one, and each case has features of its own which make it of value to those who may wish to study the results of various methods of operating or the phases of the disease.

There are ways of treating a pedicle that seem to me far preferable to the extraperitoneal one adopted for this case, and with a short pedicle like this one the operation of ligating the broad ligaments and uterine arteries with the peritoneal flaps drawn over the stump (as is done by Baer) is quite as easy of execution, and gives infinitely better results, if the mortality does not prove to be too great.

I was most anxious to have this patient recover and naturally adopted the plan, which up to date, has proved most successful from the mortality standpoint.

I hope and believe the newer method is capable of making a record as good or better than the old, for it is better surgery and more satisfactory from every point of view.

M. J. T., (colored). Age, thirty-eight. First noticed tumor thirteen or fourteen years ago. Has had no bleeding at periods; flows five or six days. Has had intense pain in the small of her back, and inguinal regions. Has had asthma since she was fourteen years old, with more

¹ Read at meeting of New Jersey State Medical Society, Asbury Park, N. J., June 28th, 1893.

or less cough at all times. The abdomen is very much distended by a hard nodular mass, which also extends into the pelvis and nearly fills it. This tumor is connected with the uterus and gives one the impression that the uterus is lost in the growth. By my advice she consented to an operation, and one of the most skillful abdominal surgeons of Philadelphia agreed to operate on her. November 23, 1889, he came



FIBROID TUMOR OF THE UTERUS WEIGHING 14½ LBS.

to Trenton with two assistants; chloroform was administered, and an incision made through the abdominal wall. A large amount of ascitic fluid escaped. The tumor was carefully examined through this incision, and it was concluded that the growth could not be removed. Adhesions were said to exist between the tumor and the liver, and the tumor and the colon, which could not be separated without

the greatest danger. The incision was closed and the patient made an uneventful recovery. Since this operation the patient has been kept on full doses of iodide of potash and sulphate of magnesia. The tumor has increased in size and the pains have increased in intensity, so that they are no longer bearable. The asthma has been greatly improved by the iodide, so that she rarely has an attack and has little cough in the interval. She is desirous that a new attempt shall be made to remove the growth, and is fully aware of the great danger of such a procedure.

At my request she was admitted to St. Francis Hospital and prepared for operation.

June 3rd, 1893. Operation. Assisted by Doctors Cantwell, Mac-kensie, McGalliard and Norton, and in the presence of the staff, the abdomen was opened through the old cicatrix. The incision was extended three inches above the umbilicus, when without difficulty a nodular and multiple fibroid was easily turned out. There were no adhesions along the line of the old incision and the sole difficulty in completing the operation was in making a pedicle. The elastic ligature was crowded well down on to the body of the uterus, and the pins introduced above it. The tumor was then amputated, and the stump reduced in size as much as possible by the removal of nodules and trimming of the edges. There was a single loop of intestine (sigmoid flexure) attached to the left side of the uterus but it was well below the position of the pins and wire and was not detached. Hemorrhage of the stump was entirely controlled by the elastic ligature and subsequently by the Serre-Nœud. The incision was closed in the usual way and the wound dressed with iodoform, bichloride gauze, and boracic acid. The pedicle was so exceedingly short that for thirty-six hours the patient suffered excruciating pain in the back and required liberal hypodermics of morphia for its relief. Pulse for the first two days was about 80 and the temperature about 102°.

REPORT OF PATHOLOGIST.

HORACE G. WETHERILL, M. D.

DEAR SIR:—

I submit the following as my examination of tumor removed by you. Macroscopically it was found to consist of one large mass, nine inches in length by seven inches in breadth, with distinct capsule showing prominent blood vessels upon its surface with small nodules studded over it, also two (2) large lobulated masses composed of small

nodules. Surrounding these are five distinct nodular masses about the size of one's fist with two smaller ones. Also about base of pedicle numerous small masses size of birds egg. One pediculated fibroid polyp, one inch in diameter, dangled from the fundus of the uterine canal about midway between the cornua. On section the tumor was firm and tough, grating under knife and having a glistening look. Weight, fourteen and one-half pounds.

Microscopically. The appearance is that of fibrous tissue containing connective tissue cells, few blood vessels; fibres having no special arrangement in bundles.

Diagnosis. Hard fibroma.

I. M. SHEPHERD, A. M., M. D.

June 6. The patient is very comfortable to-day. Has little pain; passed her urine and her bowels have moved in response to salines, castor oil and turpentine. Temperature 103 2-5° F. Is bright, chatty and hopeful. Has taken a little beef tea to-day.

June 10. Is still doing well. This is the eighth day. Had asthma for twenty-four hours and is still breathing with difficulty. Pedicle is without odor. One or two stitch-abscesses noticed.

June 24. It is three weeks to-day since operation. The pedicle came off with a little aid on the twentieth of June (seventeen days after operation) and the sinus is granulating and closing rapidly. It is about five inches deep. Was filled with foul pus from pedicle but is now clean. She had high temperature and pulse just before and after the separation of the pedicle due to absorption. Now, has nearly normal pulse and temperature, is bright and well and free from pain. Sat up in a chair for one hour to-day. Has taken no morphia for four days; 1-100 grain of strychnia sulphate being substituted night and morning; whole line of incision sound and free from any hernia. Sinus now one inch in diameter at skin. Wound closed with broad bands of adhesive plaster which had shoe hooks placed at the end with an elastic corset lacing put about them and over the dressing.

This case is instructive in many ways. It shows:

First: The unstable character of adhesions inside the peritoneum for there were none found even under the scar of the old incision, and

Second: The value of rigid antisepsis; for there must have been fever and adhesions had not the first operation been strictly clean.

Third: The chronic course of these sub-serous and pedunculated fibroid growths. Their slow growth and

Fourth: The freedom from uterine hemorrhage that often characterizes them even when a submucous polyp is present.

Fifth: The safety of removal under favorable circumstances, and

Sixth: The undoubted justification of the surgeon in making the attempt when continued pain and discomfort make life a burden, and the consent of the patient is secured after a fair statement of the chances for recovery.

Seventh: The sound cicatrix and freedom from hernia which may be secured with care in suturing the linea alba with a stout buried suture and a close approximation of the parietal peritoneum to the pedicle.

Eighth: The possibility of sepsis from the absorption of pus from the gutter about the pedicle, where the coming off of the pedicle is delayed and sloughing and suppuration takes place.

RECENT CONTRIBUTIONS TO FOREIGN LITERATURE.

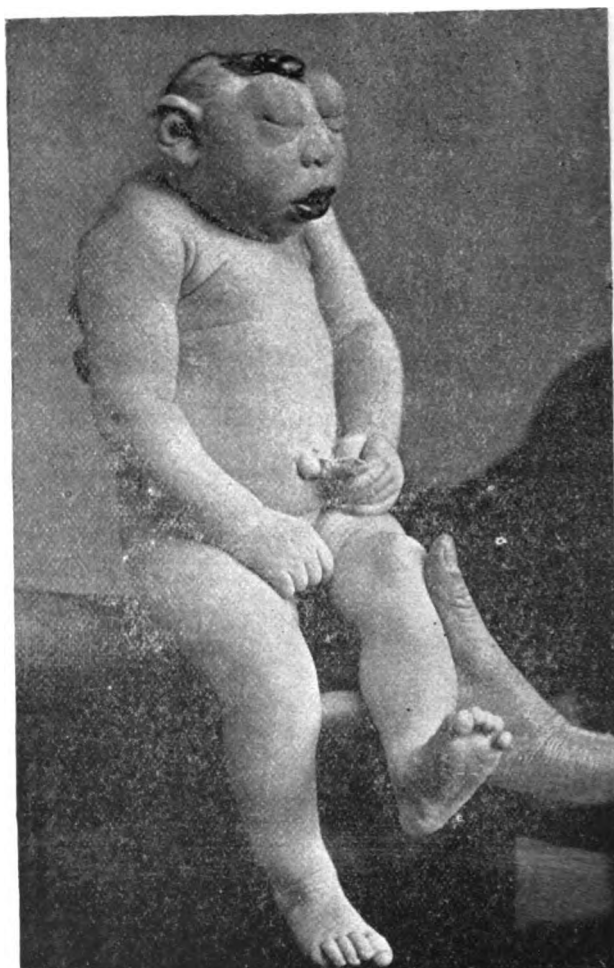
BERLIN, guide de diagnostic gynécologique a l'usage des praticiens. Avec une préface par le Dr. Auvard. 69 figures dans une hors texte. \$1.60.

RIBEMONT-DESSAIGNES, d., et., Lepage, G, précis d'obstétrique. Avec figures dans le texte. 1^{re} partic. Prin de l'honorage complet, \$7.00.

SCHROEDER'S, K., Lehrbuch der Geburtshülfe. 12. Aufl., neu bearb. v. R. Olshausen u. J. Veit. gr. 8°. (XI, 925 S. m. 162 Holzschn). \$4.80.

ZWEIFEL, P., die Symphysotomie. Nut. 2 Abbildungen, 40c.

These books may be obtained from L. Hydel, 212 East 53th St., New York. Delivered in New York at the prices above stated.



ANENCEPHALOUS MONSTER.

A CASE OF AN ANENCEPHALOUS MONSTER.

By J. C. BYNUM, M. D.

Stewartsville, Me.

On April 17th, I delivered Mrs. McC., Irish-American, aged twenty-seven, of her third child, which was well developed except the brain and bones of the head. The child was a female, nineteen and one-half inches long, twelve and one-half inches around chest and fourteen and one-half inches around shoulders. It weighed eight pounds. It was a face presentation. There was nothing unusual in the delivery. The child's heart beat for fifteen minutes after it was separated from mother. The bones of the head are not present above a line from centre of the eye to the



occipital protuberance. The brain, about the size of a pigeon's egg, covered by its membranes, lies entirely outside the scalp which is covered with hair. Under the little cerebellum is an opening in the scalp through which passes the spinal cord. There is no brain substance beneath the scalp, the little space there is being filled with fat. The prominence of the eyes is due to a deposit of fat between the skin and eyeball. The mother does not remember any shock or unusual impression of any kind while carrying the child and has always enjoyed good health. Her two previous confinements were normal; both children are alive, finely formed and intelligent.

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EDITORIAL.

THE TREATMENT OF FIBROID TUMORS OF THE UTERUS.

The determination of the proper treatment for fibroid tumors of the uterus presents great difficulties and the unfortunate patient who consults many specialists will become bewildered by the difference of views presented. One class of men advise non-interference, trusting that relief will come with the menopause. The hemorrhages and the pressure symptoms are treated by electricity and curettage, and all means possible are employed to carry the patient to the menopause. She is encouraged to bear great distress rather than run the great risks inseparable from operative relief. The justification for this position will be found in the remarks of Dr. Keith, published in 1885. "Does a mortality of eight per cent. justify an operation for a disease that, as a rule, has only a limited active life, that torments simply, and that only for a time, though of itself it rarely kills? The mortality of an ordinary uterine fibroid, if left alone, is nothing approaching a death rate of eight per cent. Could we get the mortality down to five per cent. in bad cases, and these only are fit subjects, then one might advise interference with a more easy mind." If a mortality of less than eight per cent. in bad cases is a just estimate of the let-alone treatment—and we know no one who is better qualified to determine it than Dr. Keith—then the risk that we must run to secure the chance of speedy relief is at least

twice to three times worse than to trust the tardy cure of Nature. For the average mortality of the general operator is not three per cent.; it is not ten per cent.; it is to-day nearer *twenty-five* per cent.

The number of gentlemen belonging to the above class, who are indisposed for active interference is much smaller than it was ten years ago, Many of this class have modified their views so that they may be classified under the following head: Those who operate only when the patient presents symptoms which menace life or which make it unbearable, irrespective of the size of the tumor. These indications cover very much ground. The symptoms which are directly a menace to life are renal disease from pressure of the mass, rapid growth of the tumor, uncontrollable hemorrhages which have exhausted the patient, indications of malignant disease. The symptoms which render life unbearable differ in different individuals. One patient will bear with fortitude great suffering which will completely crush a weaker sister. There are some natures that will

“Die of a rose in aromatic pain,”

and it is very important to recognize this difference in structure, the result of heredity or environment, for it would be losing valuable opportunity to induce the latter class to wear themselves out carrying about a large tumor. We must confess that we would choose the operation, though it were attended with greater danger than it is, rather than suffer as the woman Keith speaks of “She led a dreadful life with her tumor for upwards of twenty years, till it reached an enormous size. Now it gives no trouble.”

A third division may be made of those who advocate the removal of fibroids, whenever found, and particularly those which tend to develop within the pelvis. These operators urge that their statistics are so low that the patients may better run the risk of the operation than the risk of the fibroid. Many of these gentlemen claim that electricity is detrimental as it induces inflammatory action about the tumor and renders subsequent operation, if necessary, additionally dangerous. This claim is by no means established.

Yet another class of men advocate the use of electricity solely as a curative measure, and of these many claim that the results of this treatment have been so good that it is not justifiable to attempt operation until it has been carefully tried by men familiar with its use. It is a well attested fact that to apply the current to secure the best results, it requires a familiarity which can only be acquired with an ex-

tended experience and it is for this reason that results from different men may differ materially. If this method achieves all that its enthusiastic advocates claim for it it will never reach a high degree of popularity for "the treatment runs away with time, and it requires care and thought." As Dr. Jupp Sinclair remarked in his presidential address before the North of England Gynæcological and Obstetrical Society, speaking of the operation of shortening the round ligaments, "To act is so easy; to think so hard."

The removal of the ovaries, particularly for small tumors, is advocated by many when the ovary is readily removed and it is also opposed.

Many years must pass before any uniformity of opinion can prevail, but before this comes it should not be forgotten that all the views enumerated have the authority of distinguished men, and it is injudicious to advise a plan of treatment to a patient without also stating that there is great diversity of opinion among those best qualified to speak. This plan of action removes the sting from differing opinions, and it must not be forgotten that gynæcologists owe a respect to received opinions as citizens owe obedience to the laws. It has been said that the question of the best method of treatment will be settled in time by statistics. Among the original contributions to the journal for this month will be found a paper in which Dr. Baer again calls the attention of The American Gynæcological Society to an important modification of the technique of the treatment of the stump. The preliminary report appeared in columns of our esteemed contemporary *The American Journal of Obstetrics*. This modification, it is claimed, does away with the great dangers which have been found to exist when a stump is left; *i. e.*, sepsis and hemorrhage. By controlling the blood-vessels outside of the stump bleeding is controlled and the necessity of constricting the stump with a ligature is avoided. Dr. Baer has lost but two cases out of a total of thirty-seven cases. This is a remarkably good showing, and we believe the method one worthy of a thorough trial.

REVIEWS.

DIE SYMPHYSEOTOMIE. Von Prof. Dr. P. Zweifel, Leipzig. Otto Wigand. 1893.

In this pamphlet of seventy-nine pages, Zweifel after reviewing the history of symphyseotomy discusses the operation from the standpoint of his experience in twelve cases. All the mothers and eleven children were saved. Little or no bleeding was encountered in the incision through the skin and the fascia between the recti. He uses a narrow probe-pointed bistoury for dividing the pubic ligaments. In one woman, forty three years of age, he found bony ankylosis in the lower half of the joint requiring the use of a saw. Vaginal lacerations sometimes occurred even in spontaneous expulsion of the child. Hemorrhage was noted in some cases during the passage of the head from rupture of the anterior soft parts. In two cases of vaginal injury the urethra was torn from the vaginal wall.

For reunion of the joints the author advocates suturing the bones with catgut. A fissure of a fraction of an inch in width was found in passing the finger behind the symphysis in every case in which the suture was omitted. For a time he employed silver wire but this was abandoned for the reason that in several instances incontinence of urine followed. Closing the symphysis by suture gives a better result for the pelvic joints and lessens the danger of hemorrhage.

The woman's restoration to health after symphyseotomy he found as complete as after the Cæsarean section but the division of the symphysis, he thinks, could not so easily be repeated on the same patient as the Cæsarean operation. No permanent injury was done to the sacro-iliac joints, and none of Zweifel's patients complained of pain in the sacro-iliac region.

The author's conclusions are substantially as follows:

First. Symphyseotomy may replace the Cæsarean operation and craniotomy on the living foetus in flattened pelves with a conjugate above 6.5 cm., full mobility of the sacro-iliac joints and an average development of the child being assumed.

Second. With a living child the Cæsarean section should be done when the conjugate falls below 6.5 cm. When the child is dead delivery with the cephalotribe or basiotribe is permissible down to 4.5 cm.

Third. Symphyseotomy should be resorted to in moderate contraction of the pelvis in which experimental traction with the forceps persistently fails.

Fourth. Version should be restricted to contractions between 8.5 and 9.5 cm. in the conjugate.

Fifth. Usually the symphysis is best divided with a blunt pointed bistoury, guarded with the finger behind the symphysis.

Sixth. The expulsion of the child after opening the symphysis, should, if possible, be left to the natural forces.

All operators have experienced difficulty in fully and permanently immobilizing the pelvis after symphyseotomy. Failure to maintain complete fixation of the symphysis during the after treatment is undoubtedly responsible for the imperfect joints which have so frequently resulted. Until we have some better means for immobilizing the joint the bone suture as practised by Zweifel should not be wholly discarded.

CHARLES JEWETT.

MEDICAL POCKET ATLASES. OBSTETRICS, Part I, Labor, delineated in 98 plates, by O. Schaeffer, M. D., Assistant at the University Frauen-Klinik in Munich; translated and published under the supervision of J. Clifton Edgar, M. D., Adjunct Professor of Obstetrics in the University of the City of New York; 1893, New York; L. Hydel. \$1.50.

Fifteen or twenty years ago the illustrations of a large majority of books and monthly magazines were very feeble and cheap. To-day the best artists are well paid for their strongest work to illustrate the same grade of popular literature, while the book of travel and the popular novel may boast the names of the most famous artists of the country.

What is the secret of the change? Partly, cheaper and better reproductive processes, but chiefly—money. The publishers have found it wise to abandon a penurious policy and to employ the best of talent. They made it worth while for men to draw in black and white and they made it worth while for the best men to develop special skill for this special work.

In medical publications the good time has not yet come. We are still where the magazines were fifty years ago. Medical authors have to pay for their own illustrations and with poor printing, cheap reproduction, and indifference on the part of the publishers, we could expect nothing better than the ordinary illustrations of our medical journals and books. From this criticism we exempt many magnificent atlases; they are published chiefly, however, abroad. On the conti-

nent artistic work of high grade can be procured for a relatively small sum, and men possessing great technical skill are employed at illustrative work at small salaries. When the medical public wakes up sufficiently to demand good illustrating, good illustrating will come.

Dr. J. Clifton Edgar is doing good service to the cause of medical illustration in issuing Schaeffer's little atlas. It is intended primarily for the student, and in its two parts is expected to cover the whole field of obstetrics. Part first is concerned with labor and gives us ninety-eight delineations of the various steps of normal and abnormal delivery. The pictures are chiefly of the Schultze school, although they show a wide acquaintance with the literature of obstetrics. They are very clear and straightforward and simple. They would be somewhat clearer if letters were used instead of numbers on the plates, or if instead of numbers, wherever possible, the different parts were clearly labelled as Bland Sutton has done on his book on the Surgical Diseases of the Ovaries and Tubes. A few of the plates lack clearness, as 93, 96, 35, and, indeed, the section on the forceps is the least correct and satisfactory of the whole work.

In conclusion, we might say that we know of no work which will be of so much assistance to the student and practitioner in comprehending mechanisms, except the more accurate and more full, more expensive, and far more beautifully pictured illustrations in Faraboeuf and Varneir's "Accouchements."

R. L. D.

DISEASES OF WOMEN:—A Manual of Non-Surgical Gynæcology designed especially for the use of Students and General Practitioners. By F. H. DAVENPORT, M. D., Instructor in Gynæcology Harvard Medical School. Second Edition, revised and enlarged. Duodecimo, 314 pages, 107 illustrations. Cloth, \$1.75. Philadelphia, Lea Brothers & Co., 1892.

This little book has good clear type, is neatly bound and well illustrated. In the preface, the author has claimed the right to omit pathological anatomy and such rare affections as only interest specialists and diagnosis and treatment are to receive the most attention.

The chapter on examinations will be of great service to both student and practitioner. It points out very logically the various methods of manipulation, at the same time bringing before the student the many obstacles which he must encounter and giving a simple yet rational solution of the same. The cuts in this connection are valuable, showing very clearly the organs in relation to the pelvis during an

examination. Also the various gynæcological positions, and introduction of instruments are demonstrated. The third chapter is devoted to Amenorrhœa and there is one on Scanty Menstruation and another on Dysmenorrhœa and so on. These symptoms are taken as subjects, and tend to mislead by impressing them upon the student as diseases, although this does not seem to be the aim of the author. The Galvanostem-pessary is given an honorable mention in the treatment of Amenorrhœa. Also it has been recommended to pass the sound every other day where the flow is absent. This plan will be received graciously by those abortionists who seek protection from medical literature.

Discission, recommended for a class of anteflexed uteri, is an operation considered by many to have justly fallen into disuse.

The author has treated the subject of displacement of the uterus at length. He has given many valuable methods of procedure, in diagnosis of position, replacing the uterus and measurements of the vagina, for uterine supports, yet we regret that he has not brought out in the same clear style that is characteristic of the author, something about the mobility of the uterus, which is, possibly a more important factor in the physiology of the pelvic organs than position. The pessary is treated of as an instrument whose function is to hold the uterus in a position, rather than to afford it support in relation to the pelvic blood vessels.

Under the head Metrorrhagia, fibroids, lacerations of the cervix, and abortions are treated. These are dealt with rather more superficially than we should expect.

In the treatment of ovarian and tubal diseases the author has taken a conservative view and given due credit to the various non-surgical methods of treatment.

The last chapter gives a list of instruments which the author recommends and describes, this will undoubtedly prove to be a valuable guide to the beginner.

From this book we would get an idea of the proper relation between specialist and practitioner. The course of procedure offered by the author is not dictated but selected as his deduction, following a course of reasoning. We have been able to note but few points for adverse criticism and for that the author has again placed the profession in his debt.

E. E. TULL.

GYNÆCOLOGY IN SCOTLAND.

BY T. D. BISSELL, M. D.

Abstract of Meeting of the

OBSTETRICAL SOCIETY OF EDINBURGH.

March 8th, 1893.

Dr. J. W. BALLANTYNE showed the "Arnold's" steam-sterilizer for infant feeding, and demonstrated its mode of working. Its special advantages were that it could be more easily supplied with water, as it could be seen at once when a fresh supply was needed; the quantity of water to be heated was small so that sterilization began soon after heat was applied; the bottles were less apt to crack than when standing in boiling water; less air was expelled from the milk by this process and its taste was not so flat; the apparatus was not so large and cumbrous as others.

In discussing the paper, read by Dr. J. C. Webster on the occurrence and significance of uterine rotation, Dr. Haig Ferguson said he thought that Dr. Webster argued erroneously, with regard to uterine rotation in foetal life. No such rotation probably existed as such, but one Müller's duct (the left) usually lay somewhat in front of the other, thus giving the uterus a "set" in an oblique direction. He differed with Dr. Webster also in respect to the influence of the child upon the uterus. He thought that the position of the child was determined by the uterine rotation. He was also of the opinion that the ovaries followed the uterus in its rotation, and for that reason the uterus should be grasped, in the third stage of labor, antero-posteriorly as regards itself and not as regards the pelvis.

In discussing Dr. Hautain's paper on "Benign Growths of the Uterine Mucosa," Dr. Ferguson said that he had never heard of any case at all similar to the one Dr. Hautain reported in which well marked fibrinous polypi developed apart from pregnancy. The clear demonstration of the organization of the blood-clot in utero was most instructive and suggestive. With regard to the symptom of mucous polypi, he recalled a case where mammary engorgement and lacteal secretion were the only symptoms in a patient past the menopause; on removing the polypi these symptoms disappeared.

Elephantiasis Arabum Vulvæ; Amputation: Recovery.

BY J. H. CROOM.

True elephantiasis affecting the vulva is rare in this country; many cases have been recorded as such but have proved to be simply exaggerated conditions of lipoma, fibroma or some tertiary syphilide which bore a close resemblance in external appearance. The case here recorded is that of a married woman thirty-two years of age, has had three children. At thirteen suffered from suppurating tubercular glands of the neck. Five years ago glands in the groin of the right side suppurated and broke down. Twelve months thereafter first noticed swelling in right labium, which has ever since continued to increase. Two years ago left labium commenced to hypertrophy, preceded also by destruction of glands on that side. On the right side, towards the mons veneris, the tumor was hard and nodular, at the side soft and smooth. Its antero-posterior diameter measured twelve inches; lateral six inches; vertical six inches. The tumor was fairly movable and somewhat pedunculated. The mass was removed with a single sweep of the knife; hemorrhage was inconsiderable. A drainage tube was used because of a copious discharge from the gelatinous-like tissue; it was removed at the end of two days. Patient made a good recovery. The tumor was found on examination to consist of a hypoplasia of the cellular elements of the connective tissue and dilated lymph spaces between. In all varieties of elephantiasis dilatation of the lymph channels is a constant lesion. In the case reported the initial causation was probably in the destruction of the lymph glands and the consequent obstruction of the lymph stream resulting in stagnation and accumulation of lymph.

Dr. J. R. MORRISON read a paper entitled:

*Some Mistakes in the Technique of Abdominal Surgery.*¹

The causes of failure in abdominal surgery are those common to all major operations, and the three most general mistakes are:

1. Septic contamination.
2. Imperfect arrest of hemorrhage.
3. Neglect of shock.

Sepsis.—Septic infection, unless previously present, is invariably due either to faulty technique or to faulty after-treatment. Migration of organisms from the intestinal tract, bad surroundings, previous con-

¹ Before the Medico-Chirurgical Society of Edinburgh, March 1, 1893.

stitutional condition, dirty visitors are not to be regarded as fair excuses for bad results. Abdominal operations should in no way hamper a surgeon in his ordinary work, nor are post-mortem examination and dissection prejudicial when suitable antiseptics are properly used.

Rougher surgery will be tolerated by the peritoneum than by any portion of the organism outside of it, and though both may be exposed to the same deleterious influences we will sometimes find the superficial parts suppurating and the peritoneum in no way involved. The unavoidable conclusion is that the peritoneum has a resisting power not belonging to any other tissues. The effect of peritoneal infection is, however, always more serious than infection occurring elsewhere, so that a mistake made in the abdomen is more grave than one made outside.

Hemorrhage.—All bleeding points in the abdomen, however small, should be secured, because of the difficulty of keeping up efficient pressure, and also because the peritoneum, like the blood vessels, possess a power in preventing coagulation of the blood. Where bleeding is anticipated a free incision should be made and point exposed. Sponge packing and Trendelenberg's position are invaluable aids. If point cannot be satisfactorily tied, clip-forceps may be left on for twenty-four hours. A bleeding surface should be firmly packed with strips of gauze which may be removed in forty eight hours. In all cases where hemorrhage is possible, a drainage-tube should be inserted. If after-bleeding occurs a solution of perchloride of iron should be pumped in and out a few times till bleeding ceases, re-inject perchloride if bleeding recurs.

Shock.—Warmth is the best antidote to minimize shock. The limbs should be wrapped in blankets and hot water bottles packed under and around the body. In exhausted cases enemata of brandy-milk and beef tea are administered. The patient is in this way thoroughly prepared for operation. It is best to anesthetize her on the table upon which she is to be operated, clothing should be well protected by a mackintosh, and only damp or soiled clothing taken off patient until free perspiration and natural heat are established.

Hemorrhage, even though slight, greatly adds to the danger from shock, but no one should be allowed to die from shock alone, it should always be treated. The body should be enveloped in hot flannels; the face rubbed at intervals with a coarse towel; the mouth sponged with raw brandy; an enema of beef tea, brandy, and milk, slowly admin-

istered, and the foot of the bed elevated. If an operation is necessary and is undertaken, it ought to be completed. There should be no limit to its duration or extent if the completion of it offers a scientific chance of life. Incomplete operations are never satisfactory and are more disastrous in their results than the most heroic when thoughtfully planned and skilfully executed.

The incision should be large enough to admit the operator's hand without bruising the abdominal wall. Free exposure of parts to be dealt with is most important, and cross cuts should be made if necessary. If the abdominal wall is very fat the length of the incision should be proportioned to its thickness, for bruised fat is the worst possible tissue for healing. The peritoneum when reached may be taken for a tumor wall and extensively stripped. It may be found a quarter of an inch thick and so firm as to retain a convex shape given to it by a tumor within. Where the peritoneum is thickened and it is doubtful whether it is a case of universal adhesion to a tumor or one of tubercular encysted peritonitis it is best to cut right on, in either case the difficulty will be immediately cleared up.

To avoid wounding the bladder, open the peritoneum at the upper part of the incision, pass both forefingers into the opening, and, steadying the peritoneum above with the left forefinger, tear down the length of the wound with the right. If on picking up the peritoneum with forceps it does not drop away from the intestines, select another point. In closing the abdominal wall the most serious mistake that can be made is the inclusion of a portion of the intestines in a loop of suture. To avoid such an accident pass all sutures before any are tied, fix the ends of sutures on each side by a pair of forceps. An assistant takes the bunch of sutures on either side in each hand, detaching first the forceps. The abdominal wall is then drawn firmly forward by lifting all the sutures up together, by this means the intestines and omentum are kept back. Traction is kept up and the sutures are tied one by one from above downwards.

Ventral hernia is best avoided by suturing in three layers. The resulting cicatrix being firm and unyielding. By the ordinary method of suturing the skin and peritoneum are brought together and the resulting cicatrix is thin and weak, especially if the peritoneum intrudes between wound surfaces. It is a mistake to leave uncovered intestines next to the abdominal wound, the omentum should always be drawn down. Indiscriminate flushing of the peritoneal cavity is a great mistake. Irrigation should be limited to cases in which blood, ovarian

fluids, intestinal or other visceral contents have escaped into the peritoneum; to limited collections of pus it is quite unsuitable, as there is great risk of a diffuse purulent infection. Sterilized normal saline is the most perfect fluid to use for irrigation, chilling of the intestines adds much to shock and danger of operation. If the escape of intestines cannot be avoided, cover them with warm moist towels or flat sponges. It is a mistake to work in the dark, where landmarks are obscure.

Make a free incision, and with large retraction, a good light, and, in pelvic cases, Trendelenberg's position, any part of the abdominal or pelvic cavity should be seen. In cases of acute general peritonitis it is a mistake to expect to do any good by incision, washing out or drainage. If pus be found localized by recent adhesions, it is a mistake to search for the hidden cause, as there is a grave risk of causing diffuse general peritonitis by disturbance of adhesion. In tying uterine appendages very thick silk should not be employed for it has an insufficient bite. A half inch of tissue should be left beyond the ligature so as to prevent slipping, for a vessel in the pedicle may retract into the cellular tissue, a broad ligament hæmatocele form and burst into peritoneal cavity, by drawing away the tissue from the ligature if it has not a sufficient grasp. It is best in many cases to tie separately the ovarian artery.

In supra-pubic cystotomy or lumbar nephrectomy the mistake of opening the peritoneum may be made. If recognized before peritoneum is soiled, grasp edges with clip forceps and ligate. Suture cannot be trusted to close effectually the opening.

GYNÆCOLOGY IN ENGLAND.

By WM. R. PRYOR, M. D.

A Modification of Stoltz's Operation.

A. D. LEITH NAPIER (*British Medical Journal*, April 8, 1893) writes strongly advocating Stoltz's operation for cystocele. He has abandoned Emmet's, Sims', Winckel's, Dieffenbach's and Reamy's method, and adopts Stoltz's operation as the only reliable method for anterior vaginal prolapse. He operates as follows: A sound is introduced into the bladder and that viscus is displaced as far downwards as possible. The vaginal membrane is seized with forceps and dragged down. With the scalpel a circular incision is marked as the boundary

of the proposed denudation. He next introduces the suture. This is followed by the denudation, which is done with the scalpel. This finished, the sound is withdrawn from the bladder and the denudation pushed up at the same time that the suture is drawn upon and the anterior vaginal wall puckered up like the mouth of a tobacco pouch. Any projections of the membrane he sews with catgut. The silk thread is left in twelve days. He quotes illustrative cases. He claims these advantages of this modification of Stoltz's original procedure. 1. The amount of tissue to be removed may be more accurately determined. 2. No hemorrhage obscures the field. 3. No retraction of tissue ensues as happens when denudation is done before the suture is introduced.

[The advantages of this procedure over the original Stoltz's are apparently fanciful. If the denudation be made with the scissors a minimum of tissue is removed and the bleeding is but capillary. The suture is preferably of silkworm gut ("salmon-gut"), and the edges of the wound are not to be accurately approximated, but a little space should be left in the centre for drainage and that a circular cicatrix may form. Stoltz insists upon this latter point. The operation it seems to us should be limited solely as a procedure supplementary to reparative work on the posterior wall and perineum. In cystocele pure and simple where colpo-perineorrhaphy is not indicated Emmet's operation cannot be improved upon. Stoltz's operation drags the fundus forward, a movement not necessary in uncomplicated cystocele. But with this limitation it cannot be questioned that Stoltz's procedure is a valuable one. Napier's modification has no advantage over it.]

Placenta Marginata.

B. Strachan (*ibid*) reports a case of placenta marginata the anomalous relation of chorion and placental margin being nearly complete. The case was characterized by the precipitous expulsion of the placenta, it following immediately after the birth of the child. This he explains by lack of membranes around the margin making the surface of union between uterus and placenta less extensive than usual.

Triplet Extra-Uterine Pregnancy.

Sänger (*Central f Gynæc.* 7, 1893), reports a case of cœliotomy for a triplet extra-uterine pregnancy. Multilocular cyst of left ovary. Right tube greatly dilated by clot, ostium opening into a hæmatocele as large as child's head. There was a cavity of the ostium lined by

chorionic cells. The right adnexa were removed. The right uterine cornu was enlarged symmetrically as by a fibroid the size of an apple. This was incised and S. discovered an interstitial twin pregnancy with two amniotic sacs. The cavity was dissected free from chorionic villi and closed by suture. Uterus fastened to abdominal parietes and pelvis drained by the Mikulicz method. The patient had post-partem peritonitis four years previously. Diagnosis ectopic gestation made before operation. Recovery.

House of Commons and the Registration of Midwives.

At a meeting of the Select Committee of the House of Commons on the Registration of Midwives, (*Brit. Med. Jour.*, No. 1698), Drs. Broxton Hicks and Williams (Cardiff) expressed their approval of supervision of midwives. Incidental to this investigation Drs. Annie McCall, visiting medical officer to Clapham Maternity, reported three thousand cases of labor with one death, three hundred cases a year being attended at patients' homes. This is a showing unequalled in the world, the conditions of the service being taken into account. The cases were attended by students and the medical officers of the hospital.

Heretofore when physicians have advocated a radical departure from existing conditions of medical practice, such action has been ascribed to various sinister motives. Such argument may not obtain in the present movement in England and New York, looking to the proper training and registration of midwives. For it will be conceded that a supply of trained midwives will cut into the practice of a certain class of physicians very seriously. That many women are ruined by sepsis and other faults of midwives, that many die, that many children are still-born owing to imperfect methods of delivery are facts well known by every physician of experience in New York. Much of our population is foreign, and the women of such come to America with notions of the skill of the well-taught midwives of the "old country." This is especially true of German women. They find the midwife here an unclean, untrained old woman who seeks this way to make a living merely because she can not gain one in any other channel. The death-rate in New York is higher than it should be because of the ministrations of these ignorant creatures. To license only those who upon examination are found fit for such work, to make it a misdemeanor for any unlicensed to practice, to establish a school for training midwives, if embodied in a proper law, would materially lower the death-rate of our

city and give proper attention to a certain class of parturients. Such things as immediate discovery of lacerations, early report of septic diseases, and seeking proper counsel in obstructed labors are unknown among other midwives as a class. The discussion of this subject before the New York Academy of Medicine should not be the only act of that body, but some effort should be made the coming winter to have passed a law which will elevate the standard of midwives and save many lives of mothers and children. If the mortality among women confined by midwives be too high, who may count those who have survived and remain chronic invalids as the result of infection directly due to the filthy methods of midwives?

Cervical Dysmenorrhœa.

M. Hanfield Jones (*British Medical Journal*, No. 1691) describes a new form of dysmenorrhœa, "cervical dysmenorrhœa." The paper is very unscientific, and so clinical as to remind one of the rule-of-thumb work of twenty years ago. The author endorses the idea that menstruation is a mimic abortion, and is accompanied normally by dilatation of the os internum, this latter brought about by contraction of the uterine muscle just as in labor. He speaks of membranous dysmenorrhœa as being a distinct affection differing from all others, whereas it is but an aggravated form of a very common condition. He deals also with muscular spasm of the sphincter fibers of the os internum. Having finished the paper, in the main, one is not surprised on coming to treatment to find leaches, purgatives, carbolic acid, iodine and hot douches for the endocervicitis and endometritis coexisting; but when the cases are not acute he advocates rapid dilatation by means of Hegar's bougies. The only comfort one gets from the perusal of such a paper as this and that of Dr. Bedford Brown, who describes nine forms of endocervicitis, lies in the hope that those gentlemen and their followers may see the cervix only and not invade the cavity above the internal os. Thus may women's safety rest not with scientific men, but with the empirical. The cervix saves the more important and delicate structure, the endometrium, much of the attack from "minor gynæcologists." Jones does not mention the stem-pessary, but is fond of a Hodge for retroflexion. Every one should read this article and then study the subject in the first edition of Courty's work. The paper is well worth reading.

Composition of the Fœtal Urine.

Arthur Helme (*British Medical Journal* No. 1694) publishes a case which is important as showing the difference between the urine of the

foetus and the amniotic fluid. The urine was collected during birth of the child and before it breathed. Analysis showed that the urine contained kreatinin and urea, but *no* phosphates and *no* sulphates, both of which are present in amniotic fluid. Therefore, although the foetus may contribute to the amniotic fluid, its kidneys are by no means the sole source of the fluid. But it scarcely needed this case to strengthen the argument against the hypothesis of the foetal origin of the amniotic fluid.

Treatment of Chlorosis.

RALPH STOCKMAN (*British Medical Journal* No. 1688) has made some careful comparative tests of the efficacy of iron, manganese and hydrochloric acid, and hæmocallal (Kobert). With the exception of the iron none of the preparations used produced any marked effect upon either the number of red corpuscles or the percentage of hæmoglobin. The author obtained the best and most marked results with Ferri Carb. Saach in gr. x, doses t. i. d. He also got good results from the use of ferrum redactum. Cases were also treated for comparison, by attention to the dietary alone, and others by regulating the bowels, both classes with no improvement. The influence on the percentage of hæmoglobin was marked in all cases, one being raised from forty-seven per cent. to eighty-two per cent. in two months.

The cases were given no special treatment whatever, and no attention was paid to whatever dysmenorrhœa or other disturbance of uterine function which co-existed.

ABSTRACT OF THE TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF LONDON.

Session 1893.

Bony Girdle From a Dermoid Tumour.

By S. W. WHEATON, M.D.

DR. WHEATON showed a specimen removed from a dermoid tumour of the ovary, occurring in a woman, aged thirty-two, who had been four times pregnant. It consisted of a complete elliptical girdle of bone, measuring one and one-half by two inches in diameter, and was fixed to a larger lobulated bony mass, measuring two and one-half by one and one-half inches in diameter, and having an indistinct resemblance to an immature foetal skull. The girdle consisted of four distinct separate pieces of bone, movable upon one another. The two lateral pieces were longer and curved, the other pieces being short and straight. It thus resembled the typical bony somite of a vertebrate animal. A tooth was fixed upon one of the lateral pieces of bone. The girdle was contained in the wall of a cyst, which contained cheesy material and dark coloured hair; the larger lobulated mass formed the floor of another cyst. The whole tumour measured eight inches in its longest diameter and four inches transversely; and besides the two cysts mentioned, which were situated at the base of the tumour, it contained two smaller cysts and an innumerable number of small cysts collected together into a sponge-like mass, and having upon its upper surface a large thin-walled cyst filled with clear fluid. The tumour extended two inches above the umbilicus, having developed from the right ovary, and was tightly wedged in between the uterus and bladder in the middle line of the abdomen. It gave rise to great difficulty in diagnosis, the presence of a distinct ring and nodular bony mass, which could both be felt *per vaginam*, raising the suspicion of an extra-uterine gestation. An exploratory operation was decided upon, and performed. The tumor was removed and the patient made a complete recovery.

M. Répin had shown a specimen before the Anatomical Society of Paris, an account of which appeared in the 'Annales de Gynécologie et d'Obstétrique,' August, 1892; in this specimen four imperfectly developed foetal limbs were found embedded in the wall of a dermoid

cyst. In two of the limbs distinct digits were present, and the limbs were fixed to a solid mass of bone, bearing at its upper end a cup-shaped mass of bone, which was supposed to represent the base of the skull, and from which teeth were growing. Two cords represented the sciatic nerves, and a salivary gland was present. The same cyst contained a loop of small intestine, fixed to its wall at some distance from the bony mass.

Dr. WHEATON said that the presence of symmetrical bony developments, as in the specimen shown, together with mammæ, nipples, teeth, hair, glands, and possibly nerve-fibres in dermoid tumours of the ovary, and the fact that they might occur at any age, suggested that they were due to the partial development of an unimpregnated ovum or an imperfect parthenogenesis. The development of complete individuals from ova, without previous impregnation, was not uncommon in some of the lower animals, particularly the Insecta; and the term parthenogenesis was first applied to it by the late Professor Owen. It was proposed to make a careful dissection of the specimen after maceration.

A committee, consisting of Drs. Cullingworth, Herbert R. Spencer and Wheaton, was appointed to report on this specimen.

Bilateral Cephalhæmatomata.

Dr. WHEATON showed a cast of the head of a child suffering from bilateral cephalhæmatoma. The mother was a primipara; there was no pelvic contraction; the presentation was of the vertex in the first position, and the labour not unduly prolonged. The tumors extended one on each side of the sagittal suture from the coronal to the lambdoidal suture, covering almost the whole of both parietal bones, so that the back of the child's head had a natiform appearance.

Around the periphery of each tumor there was a characteristic elevated bony margin. The tumors completely disappeared in a fortnight. Dr. Wheaton said that the specimen was interesting from its rarity. The fact that these tumors might be bilateral or multiple was not mentioned in text-books.

Professor Merttens, in the 'Zeitschrift für Geburtshülfe und Gynäkologie,' vol. xxiv, p. 215, stated that in thirty years twenty-one cases of cephalhæmatoma had been observed at the Marburg clinic, giving a proportion of one in three hundred children born; in two cases only was there more than one tumor, and in only one of these were the tumors bilateral. These tumors were generally supposed to be due to laceration of a small vessel passing from the pericranium to the bone

with consequent accumulation of blood beneath the pericranium, the laceration of the vessel being due to severe pressure on the head during birth. The tumors might, however, develop where pressure on the head was not unduly severe, as in the present instance. Having had the opportunity of dissecting a recent case, he found that most careful dissection failed to discover any vessel which had been torn, and thought that the hemorrhages in these cases were capillary, and due to asphxia occurring in the infant during birth.

The case was also interesting from the point of view of forensic medicine, as showing that large multiple swellings of this nature might occur after a perfectly normal labor, without any undue pressure on, or violence inflicted upon the child's head.

Dr. AMAND ROUTH asked if it was quite certain that the hard ridge felt round the edge of an absorbing cephalhæmatoma was due to bone formation, and not, as some thought, to partly organized clot at the periphery, whilst the central portions had become softened and depressed by partial absorption.

Dr. HERBERT SPENCER had also seen an example of bilateral cephehæmatoma, and he believed a case had been published in which there were four tumors present. In post-mortem examinations of still-born children he had often found slight and occasionally considerable collections of blood beneath the periosteum covering the cranial bones, and he regarded these as differing only in degree from the cephalhæmatomata observed clinically. There were no large vessels from which the blood could come; and in the autopsies alluded to he had been able, after removal of the blood, by squeezing the skull to cause blood to issue from minute pores in the bones, this suggesting that the rupture of vessels passing through the bones to the periosteum was the cause of the effusion.

Dr. WHEATON said, in reply to Dr. Amand Routh, that in the specimen of cephalhæmatoma which he had dissected, the hard elevated margin of the tumor was due to the deposition of grit-like bone in the pericranium, at the point where it was elevated from the bone by the blood effused beneath it, and not to the formation of blood-clot.

On the Frequency of the Local Symptoms Associated with Backward Displacement of the Uterus.

By G. ERNEST HERMAN, M. D. LOND., F. R. C. P.

Obstetric Physician to the London Hospital.

This paper is based on an analysis of 407 cases of backward displacement of the uterus.

The author finds that *chronic pain* of some kind is present in nine-tenths of cases of backward displacement of the uterus. The most frequent seat of pain is the back, generally the sacral region. Next most often come sensations of descent, and unilateral pains, mostly in the ovarian region, cases of left-sided pain, outnumbering those of right-sided pain in the proportion of three to one. In a small proportion lower abdominal pain is the chief complaint, and in a very small minority trouble in locomotion is the prominent symptom.

Pain in defæcation is present in less than half the cases. In the majority of the cases in which it is present it is accounted for either by constipation or by morbid conditions of the rectum. The author estimates the proportion of backward displacement of the uterus, in which the displacement is the sole cause that defæcation is painful, at about one in nine.

Backward displacement of the uterus has no appreciable effect as a cause of *painful micturition*; but *bladder irritation* due solely to the displacement is present in about one case in five.

Leucorrhæa is not commoner in cases of backward displacement of the uterus than among other patients.

Dyspareunia is present in at least one-sixth, and probably in a larger number; absent in at least one seventh.

GYNÆCOLOGISTS are still far from unanimous as to the symptoms which are, or may be, caused by backward displacement of the uterus.

In considering the question of what these symptoms are, it seems to me that the first thing to be ascertained is the frequency with which different symptoms accompany the displacement.

The only author that I know of who has put before the profession numerical statements such as I am about to make is Winckel;¹ but as I am unable to ascertain how his calculated percentages were arrived

¹ 'Die Pathologie der weiblichen Sexual-Organen,' 1881, s. 127.

at, I cannot compare them with my own. Therefore, having directed attention to them, I shall not further refer to them.

This paper is based on 407 cases of retroversion and retroflexion of the uterus. I make no distinction between these two shapes of the uterus, because I do not think the difference is important. The cases comprise all those occurring in the out-patient practice of the London Hospital, without any selection, during a period in which notes were taken by myself and preserved in a form convenient for reference. Of some of these cases, at subsequent visits, full notes were taken, either by me or by a clinical clerk. Of the others I have only the brief notes taken at the patient's first visit. In two cases there was reason to believe that a small fibroid was present, and in one commencing cancer. These I have excluded. There remain 404 cases on which the numerical statements which follow are based.

In a former communication I have put before the society an analysis of the condition of menstruation in these patients. In the present one I have nothing to say as to menstruation. I propose to examine the frequency of the other common local symptoms, for which these displacements, when discovered, are often held responsible.

The symptoms, as to the frequency of which I present observations, are the following:

1. Persistent pain.
2. Pain in defæcation.
3. Pain in micturition.
4. Undue frequency of micturition.
5. Leucorrhœa.
6. Dyspareunia.

First as to *persistent pain*. In twenty-seven cases I have no record that the patient complained of any persistent pain. Although it is possible that hasty note-taking may have been the cause of the omission, yet it may be correctly inferred that if these patients had pain, it was not very bad pain, it was not the chief reason for seeking advice, and not the complaint put prominently forward.

In twenty cases I have it noted that inquiry was made, and there was no pain whatever, except of an occasional nature and at the menstrual period. Of these twenty, six applied for treatment on account of menstrual pain, seven for uterine hæmorrhage, one for hæmorrhoids, two for vaginal discharge, one for dyspareunia, one for diagnosis as to pregnancy, and the others for what they thought was "debility."

Thus we have—

357	cases,	or	88.4	per cent.,	who	suffered	from	persistent	local	pain.
20	"	or	4.9	"	who	were	undoubtedly	free	from	persistent
										pelvic
										pain.
27	"	or	6.6	"	who	suffered	either	not	at	all
										or
										very
										little
										persistent
										pain.

I now pass to the more detailed consideration of the habitual pain in the 357 patients who suffered from it. The kinds of pain complained of may be conveniently divided as follows:

- (a) Pain in back.
- (b) Sensations of descent.
- (c) Unilateral pains.
- (d) Abdominal pain not unilateral.
- (e) Pain connected with locomotion.
- (f) Other pains.

As the notes were not all equally complete, some having been very hastily taken, I think it possible that some patients who mentioned one kind of pain might perhaps, if more closely questioned, have described other pains as well. The statements I submit may, therefore, be erroneous in the direction of under-estimating the frequency of the different kinds of pain. This source of error applies equally to all the different kinds of pain, and therefore does not affect the results as to their relative frequency. It will be seen, from the figures already given, that the number of cases in which pain was altogether overlooked cannot possibly have exceeded 6.6 per cent.

(a) *Pain in Back.*

In 163 patients, or 45.6 per cent. of those who had pain, the back was the seat of the most troublesome pain.

In twenty-six of these the notes only record back-ache, without specifying the region.

" fifty-nine " the pain was sacral.

" thirty-nine " " " lumbar.

Of these, in twenty-six the pain was bilateral.

" " ten " " left-sided.

" " three " " right-sided.

" twenty-seven of these the pain was referred to both lumbar and sacral regions.

" eleven " the pain was dorsal ; and four of those with sacral pain had dorsal pain as well.

If we eliminate those with back-ache of undefined seat, and add together those suffering from each kind of pain, we get ninety with sacral pain, sixty-six with lumbar pain, eleven with dorsal pain.

Roughly speaking, then, the relative frequency of sacral, lumbar, and dorsal pain is as fifteen, eleven, and two.

Back-ache is so common a symptom among ailing women, that I do not think the mere fact that a large proportion of these patients suffered from it is novel or important. But there are two points which seem to me worth attention. One is the large proportion of cases in which the back-ache was sacral. The back-ache from which weakly women so commonly suffer is lumbar or dorsal. Although the frequent presence of sacral pain with backward displacements of the uterus is mentioned in most text-books, yet I am not aware of any numerical estimate of its frequency. The second point is that while the back-ache was in most cases bilateral, yet that, in those in whom it was unilateral, cases of left-sided back-ache outnumbered those of right-sided back-ache in the proportion of three to one. I shall consider the explanation of this after stating the frequency of other kinds of unilateral pain.

(b) Sensations of Descent.

It is generally admitted that backward displacement of the uterus is often associated with descent. The patient often finds out for herself that there is descent. Among the 357 patients who suffered persistent local discomfort, the principal painful sensations were those usually indicating descent in 133, or 37 per cent. of those who had pain.

Of these, sixty-nine complained of "bearing-down pain."

" sixty-one were still more explicit, and said either that the womb "came down," or "dropped," or "fell," or that "something" came down.

" one put it that there was "forcing in the womb."

" one said that there was a "swelling in the front passage" (slight cystocele).

" one only "felt something when she sat up."

In fifty-two cases out of these 133 the sensation indicating descent was the only disagreeable sensation of which the patient complained. In the remaining eighty-one the patients also complained of pain over and above the feeling of descent. In twelve there was abdominal pain; in thirty-six, back-ache; in twenty-two, left-sided pain; in four, right-sided pain, and in seven, pain of other kinds.

(c) Unilateral Pain.

In 139 patients, or 38.7 per cent. of those who had pain, the pain was said to be on one side of the body, but not on the other. In 106

this pain was on the left side, in thirty-three on the right. The situation of the unilateral pain was as follows :

Left-sided Pain.

- In 74 it was in the iliac—in other words, ovarian—region.
 “ 8 “ down the thigh.
 “ 6 “ in the hypochondriac region.
 “ 3 “ “ hip.
 “ 1 “ “ arm.
 “ 1 “ numbness of the leg.
 “ 13 its seat was not exactly defined. In one of these the sensation was described as “heat,” in another as “trobbling.”

Right-sided Pain.

- In 28 the pain was in the iliac—that is, ovarian,—region.
 “ 2 it was in the hypochondriac region.
 “ 1 “ down the thigh.
 “ 1 “ numbness in the thigh.
 “ 1 its seat was not specified.

It will be seen that among these cases left-sided pain was about three times as common as right-sided pain—about the same proportion as in those cases whose chief complaint was back-ache on one side.

Various explanations have been given of why left ovarian pain is so much more frequent than right ovarian pain. Most of them are such as would, if correct, account for a preponderance of left-sided disease as well as pain in the pelvis. Such for instance, are the facts that the left ovary is nearer to the uterus than the right; the left tube shorter than the right; the course of the spermatic vein different in the two sides; the disturbing influence of the rectum on the left side; the greater damage said to be done to the left side of the pelvis in delivery. Without discussing the validity of these different alleged causes of preponderance of left-sided pain, I would point out, first, that such difference in the frequency of organic disease in the organs on the two sides of the pelvis as is known to exist, is infinitesimal as compared with the great difference in the frequency of pain. Second, that this difference in the pain exists in disease which is not unilateral, as, for instance, in cancer,¹ and that backward displacement of the uterus is not a unilateral condition. Third, that among these cases the preponderance of left-sided pain over right is displayed in the figures relating to every kind of pain from which the patients suffered, and not in pelvic pain only. I take it that the simple explanation is that

¹ See Champneys, ‘Obst. Trans.,’ vol. xxii.

the left side is weaker than the right in power of resistance to pain as well as in muscular force.

(d) *Abdominal Pain, not Unilateral.*

In eighty-two patients, or 22.9 per cent. of those suffering from pain, it was referred to the abdomen without distinction of side. The seat of pain was as follows:

In 52 cases the hypogastric region.

“ 5 “ epigastric region. In four of these the disagreeable sensation was spoken of as pain; in one of them as “heat.”

“ 3 “ umbilical region.

“ 1 case the infra-mammary.

“ 19 the particular part of the abdomen was not noted.

In some of these latter the description of the sensation was unusual. Thus in two the pain was said to be associated with “shifting lumps” in the belly; one patient called it flatulent “spasms;” another, “labour-like pain;” and another, “trembling in the inside.” One complained of swelling in the abdomen as well as of pain in it. These descriptions, if correct, point to colicky pain in the bowels. I think it very probable that the patients were right in the diagnosis they had made for themselves, and that the pains were intestinal in their seat, and not dependant on any condition of the uterus.

One patient complained of aching in the pubes, another of pain in the vulva.

(e) *Pain connected with Locomotion (“Dyskinesia”).*

Pain of this nature was the chief complaint in eighteen, or five per cent. of those who had pain.

Nine of these complained of pain down the thighs.

Three “ said they could not stand long.

Two “ that they could not walk.

One that her “inside swelled” when she walked.

One that she had pain if she either stood or walked.

One complained that she could not lift anything.

There are included in this list only those who put prominently forward, as the principal complaint, the symptom named. It does not comprise all those whose symptoms were aggravated by locomotion.

(f) *Pain of other Kinds.*

In twenty-four cases the pains complained of were not referred solely to the pelvis. Among these—

Ten patients complained of "weakness." In these I have no distinct statement that pain was absent, although there is no record of its presence. In those referred to in a previous paragraph as suffering from "debility," the patients said, in answer to enquiry, that they had *no* pain.

Seven complained of "pain all over."

Three " " "sinking sensations."

Two " " pains in the limbs.

One " " a cold feeling.

One " " "gravel."

In these I take it that the pain was probably not due to the displacement, but to concomitant conditions.

2. Painful Defæcation.

Backward displacement of the uterus is commonly stated to cause painful defæcation. It has also been said to cause flattening of the fæces into a riband shape, and even obstruction of the bowels. Such consequences as these latter I have never seen, nor can I understand how they can result from bending or turning back of an unimpregnated uterus which is otherwise healthy.

Out of the 404 cases I have notes as to whether defæcation was, or was not, painful in 322.

In 144, or 44·7 per cent., it was painful.

" 159, or 49·4 " " not painful.

" 19, or 5·9 " " occasionally painful.

In those patients who occasionally had pain in defæcation, the most obvious and most reasonable explanation is that the pain depended on unusual hardness of the fæces. Among those in whom defæcation was habitually painful it is obvious that the presence or absence of pain must largely depend upon the consistence of the fæces. I can think of no way of ascertaining the hardness of the fæces in these patients except by inferring it from the fact of constipation. Among those whose bowels are costive the fæcal masses will be larger and harder than among those whose bowels act regularly.

Out of the 144 patients who had pain in defæcation I have notes as to the habit of the bowels in 122 cases. In ninety-two, or 82·1 per cent., it was costive; in twenty, or 17·9 per cent., regular.

Out of the 159 who had no pain in defæcation I have notes as to the habit of the bowels of 94. Of these, in forty-three, or 45·9 per cent., it was costive; in fifty-one, or 54·1 per cent., it was regular.

Put in another way, out of 206 patients of whose habit as to the bowels I have notes, 135 were costive, seventy-one not. Of those who

were costive, ninety-two, or 68·1 per cent., had pain in defæcation; forty-three or 31·9 per cent., not. Of the seventy-one whose bowels were regular, twenty, or 28·1 per cent., had pain in defæcation; fifty-one, or 71·9 per cent., not.

It is evident from these figures that among these patients constipation is common, and that the pain in defæcation is largely dependent upon it, but that it is not altogether dependent upon constipation.

In some cases there were morbid conditions of the rectum which accounted for the pain. In fourteen there were hæmorrhoids, in five fissures of the anus, in one prolapse of the rectum, and in three others blood was mixed with the motions, but I have no record of the condition of the rectum. Mr. Allingham has called attention to the frequent association of backward displacement of the uterus with hæmorrhoids.

There are two ways in which painful defæcation with backward displacement of the uterus may be explained, besides the effect of costive fæces on the bowel itself. One is that the straining which defæcation requires—especially when the motion is large and hard—forces the uterus down lower, and so aggravates for the time the pain habitually caused by the displacement. The other is, that if the uterus be congested and tender, hard fæcal lumps press on it as they pass, and so cause pain. Pain may, in some cases, be caused in both these ways.

There are many conditions beside retroversion and retroflexion of the uterus which may cause defæcation to be painful, and which may be present along with these displacements. It is possible that, in cases of displacement with painful defæcation, the accompaniment of one of these conditions may be the cause of the pain and not the displacement. It is begging the question whether or not the displacement causes painful defæcation, to bring forward as evidence cases in which no other cause for the symptom was discovered; for if the displacement be not capable of rendering defæcation painful, there must in every case be some other cause, whether discovered or not.

The admitted causes of painful defæcation—such as hæmorrhoids, fissure, inflammatory conditions of the rectum and adjoining parts—occur both with and without backward displacement of the uterus. If backward displacement be really a cause of painful defæcation, we ought to find this symptom more frequent in a set of cases in all of which this displacement was present, than in a set from which this supposed cause of painful defæcation is excluded.

I have taken from my note books a nearly equivalent number of cases, without any selection, except the exclusion of cases of backward

displacement of the uterus. Out of 363 consecutive cases, in forty I have no record as to the presence or absence of this symptom. There remains 323. Of these pain in defæcation was present in 130, or 40·2 per cent.; absent in 182, or 56·3 per cent.; occasionally present in eleven, or 3·5 per cent. There is thus, among the cases of backward displacement of the uterus, an excess of cases with painful defæcation of about 4·5 per cent. Assuming that other causes of painful defæcation were present in the cases of backward displacement of the uterus with the same frequency as among the patients without displacements, this would give, out of the 45·7 per cent. of the patients with backward displacements who suffered from painful defæcation, 40·2 accounted for by causes other than the displacement; and 4·5, or about one case in nine, as the proportion in which the painful defæcation may be fairly considered due to the displacement alone.

3. *Painful Micturition.*

Some amount of scalding or burning pain in micturition is frequent in all sorts of disease of the pelvic organs. It would, therefore, be surprising were it not often present with backward displacement of the uterus.

In 287 of my cases I have notes as to whether micturition was or was not attended with pain.

In 111, or 38·6 per cent., micturition was said to be painful.

“ 176, or 61·4 “ it was not.

Among the cases there was one of cystitis, one of urethral caruncle, and one of retention of urine.

The numerous causes of painful micturition, like those of painful defæcation, occur both with and without backward displacement of the uterus. I have endeavored to ascertain whether these displacements make micturition painful, in the same way as that by which I have tested the question of painful defæcation, viz., by taking a nearly equal number of cases, without any selection except the exclusion of cases of backward displacement of the uterus.

I have examined my notes of 297 consecutive cases in which backward displacement of the uterus was not present, and in which it is recorded whether pain in micturition was present or absent.

In 112, or 37·7 per cent., micturition was said to be painful.

“ 185, or 62·3 “ it was not.

This proportion is almost exactly the same as that observed among the cases of backward displacement of the uterus.

I conclude, therefore, that backward displacement of the uterus does not cause micturition to be painful, and that the pain in micturition complained of in about two-fifths of such cases is due to accidentally concomitant conditions, and not to the displacement.

4. *Frequent Micturition.*

Frequent micturition is a common reflex effect of many influences acting on the pelvic organs. One of the most common examples of this is the bladder irritation consequent on the dragging on the bladder in prolapse. As backward displacement of the uterus is frequently an effect of prolapse, we should expect to find bladder irritation frequently present with backward displacement.

I have notes as to whether or not the patient, since the existence of the ailment for which she sought advice, had found herself obliged to pass water oftener than was usual with her before; in 289 cases of backward displacement of the uterus—

In 152, or 52·3 per cent., there was bladder irritation.
 “ 137, or 47·7 “ “ there was not.

Bladder irritation was, therefore, present in the majority of the cases.

I have tested the question whether frequency of micturition is an effect, and not merely an accidental accompaniment, of backward displacement of the uterus, in the same way as the similar question relating to painful defæcation and painful micturition.

I have examined my notes of 312 consecutive cases (taken without any selection except the exclusion of cases of backward displacement of the uterus) in which I have records as to whether or not, since the illness, micturition had become more frequent than usual.

In 129, or 41·3 per cent., there was bladder irritation.
 “ 183, or 58·7 “ “ there was not.

There is thus, among the cases of backward displacement of the uterus, and excess of cases with frequent micturition of about 11 per cent. Assuming that other causes of frequent micturition were present in the cases of backward displacement of the uterus with the same frequency as among patients without displacements, this would give, out of the 52·3 per cent. of the patients who suffered from backward displacement, 41·3 accounted for by causes other than the displacement,

and 11, or about 1 in 5, as the proportion of cases in which the bladder irritation was accounted for by the displacement alone.

5. *Leucorrhœa.*

Leucorrhœa is often described as a symptom caused by backward displacement of the uterus. I have notes of the presence or absence of leucorrhœa in 256 cases of backward displacement.

In 153 cases, or 59·5 per cent., it was present					
"	63	"	24·6	"	" absent.
"	40	"	15·9	"	" occasional.

In 14 of the cases suffering from leucorrhœa there was pruritus. In 8 the discharge was said by the patient to be offensive. In 5 there were reasons for suspecting it to be gonorrhœal.

Leucorrhœa is a very common thing, and very various in its causes. To ascertain whether backward displacement of the uterus has any effect in producing leucorrhœa, I have followed the same plan as in the other symptoms previously considered. I have compared the cases of backward displacement of the uterus with a nearly equivalent number of cases, taken without any selection except the elimination of cases of backward displacement of the uterus. In the case of this symptom I have also eliminated cases of cancer, because this disease is also excluded from the cases of backward displacement, while it is a common disease, and one that also generally has leucorrhœa as a prominent symptom. I have examined my notes of three hundred and eighty-seven consecutive cases (backward displacement and cancer excepted). Among these I have it recorded whether leucorrhœa was present or absent in two hundred and twenty-two.

In 153 it was present.			
"	69	"	absent.

These numbers are so close to those displayed by the cases of backward displacement of the uterus, that I think they justify the inference that backward displacement of the uterus has no appreciable effect in the production of leucorrhœa.

6. *Pain in Sexual Intercourse.*

For obvious reasons I have not so full a record of the presence or absence of this local symptom as of the others. Some patients mentioned it without being asked, and some were asked about it. In one case it was the patient's only complaint; and in two others it was the

chief complaint, the one which the patient first mentioned. Excepting in these cases I have no means of distinguishing patients who mentioned it from those who answered inquiry about it, and therefore I am unable to estimate the frequency of its presence as compared with its absence.

In 63 cases dyspareunia was present.
" 10 " " " absent.

If we assume that in the three hundred and thirty-one patients who neither mentioned this symptom nor were questioned about it this kind of pain was absent, we have at least one-sixth as the proportion in which it was present. The fact that in seventy-three who gave information, affirmative or negative, on this point, pain was absent in ten, gives six-sevenths as the maximum proportion in which it could have been present. The actual frequency of dyspareunia probably lies between these two extremes. As I am unable to be exact as to the proportion of cases in which this symptom is present in backward displacement of the uterus, I am unable to draw any comparison between this class of cases and patients in general.

Dr. RASCH asked if the four hundred and seven cases were pure, uncomplicated cases of retroversion and retroflexion. To estimate the practical value of Dr. Herman's statistics it was absolutely necessary to exclude all other causes producing the same symptoms. An answer to this question seemed to Dr. Rasch indispensable before one could discuss the paper.

Dr. HANFIELD-JONES pointed out that the author of the paper, while tracing the connection of pain at various points with backward displacement of the uterus, had made no reference to the condition of the displaced organ. Thus the womb was often retroflexed in patients who never complained of either dyspareunia or painful defæcation, but in others, in whom the body of the womb was inflamed and acutely tender, retroflexion did give rise to great suffering during the passage of hard fæcal lumps downwards or during coitus. Again, the womb, when displaced backwards, often brought about prolapse of the ovaries and these latter, becoming enlarged and tender, were the real cause of the pain complained of. It was not correct to state that the back pain of women suffering from debility and impaired nutrition was usually in the lumbar or dorsal region, while that depending on posterior uterine displacements was always over the sacrum, for in a large proportion of cases of aching muscles the pain was referred to the mid-sacral region.

Dr. CHAMPNEYS agreed with Dr. Herman's explanation of the frequency of pain on the left side, that the left side was "weaker" than the right. That this was not due to pelvic causes was proved by the frequency of other left-sided pains, and especially left submammary pain. Pain in the bowels was generally due to intestinal causes, all the pelvic viscera being weak and unhealthy together. The unimpregnated uterus could not conceivably exert any injurious pressure on either the bowel or bladder. Its weight out of the body was about an ounce, and, as about half this was lost by the pressure of surrounding soft parts, it could only exercise a downward pressure of some half-ounce. The only other theory of pressure was that due to impaction. The conjugate of the pelvis was about four inches; the extreme length of the uterus not more than three; if flexed, still less, so that impaction was impossible. Moreover, the impregnated uterus did not become impacted before the end of the third month. The immediate effect of bearing down was not to increase but to diminish retroversion and retroflexion, the centre of the pelvic diaphragm descending more than the sides; this was easily verified. Generally speaking, backward displacements were signs of descent. He was rather surprised to hear that catarrh was not common among patients with backward displacements. In his experience the association was very common, and both were signs of absence of tone in the pelvic soft parts. He had seen two cases a little while ago which illustrated this association. Two ladies from India had catarrh and descent with retroversion. After the application of two zinc-alum points, without rest in bed and without a pessary, the uterus had climbed up into its place and the backward displacement had gone. In truth, the same condition often resulted in descent with retroversion, catarrh of the cervix, and catarrh of the rectum. With respect to dyspareunia, this was a wide term, and there were at least two principal forms, one in which the pain was associated with spasm of the vaginal orifice—vaginismus,—the other due to deep tenderness, generally from some inflammation of or about the ovary or tube. In such a case there was often tenderness on pressing the uterus, which was not really tender itself, but pressed against the adjacent tender organ. It was often described as tenderness of the uterus, but incorrectly.

Dr. GERVIS did not agree with the opinion that backward displacement of the uterus was but a stage of prolapsus, although unquestionably retroflexion without descent was of far less importance than when it occurred with it. In many cases of retroflexion without descent the

symptoms were very slight. Speaking generally, he thought that flexions, if uncomplicated, were of but moderate importance, but if associated with cervical stenosis or endometritis they became of considerable importance. He further believed that in many of the cases where there was associated ovarian pain the pain was due to a subovaritis, whose starting-point was endometritis, and that this endometritis, was, in its turn, due to the interference with normal menstruation induced by the flexion.

Dr. HERMAN said that in his opinion uncomplicated retroversion or retroflexion of the uterus caused no symptoms of any kind. Had the cases on which the paper was based not been complicated, they would not have applied for treatment. Some years ago it was believed by many that every complication that existed along with a displaced uterus was the consequence of the displacement. Some had gone to the opposite extreme, and regarded displacement of the uterus backwards as being always a bagatelle, and the presence of symptoms with it merely a coincidence. He (Dr. Herman) had compiled this paper to help himself to a correct idea of the frequency with which backward displacement was really the cause of symptoms existing along with it. It was not possible to settle this question by reporting individual cases, because the interpretation of individual cases depended on the general principles previously adopted by the observer which he could not prevent biasing his judgment. Therefore he (Dr. Herman) had adopted the statistical method set forth in the paper. He did not accept the views put forth by Dr. Gervis, and would give two reasons for not doing so. First, if retention of menses was produced by flexion of the uterus, how was it that no one had ever yet produced a uterus dilated by the retained fluid? Second, if displacement backwards caused the ovaries to be tender by producing salpingitis and oöphoritis, how was it that (as the displacement was not unilateral) this state of things was produced three times as often in the left side as in the right?

ITEMS OF INTEREST.

The following interesting case reported by Dr. E. von Adelung of an abnormally long umbilical cord is reported from the German Hospital of this city: The child, female, full term, was delivered June 18th, after an ordinary labor. The presentation was vertex left, and the cord, which measured fifty-three inches (134.62 c. m.) immediately after delivery of placenta, was coiled around the neck four times. The exceptional length allowed the coils to be passed over the head with ease, on the performance of which the livid color of the face disappeared. The specimen has been placed in the Museum of the Medical Department of the University.—*Pacific Medical Journal*.

The William F. Jenks Memorial Prize.—The third triennial prize, of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality During Labor and its Prevention." The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children;" and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia."

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1895, addressed to Horace Y. Evans, M.D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and con-

taining the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

JAMES V. INGHAM, *Secretary of the Trustees.*
August 1, 1893.

The Belgian Gynæcological and Obstetrical Society 300 Franc Prize.—The Belgian Gynæcological and Obstetrical Society have decided to found an international annual competition bearing alternately on a gynæcological or obstetrical question. Entries for the first competition will close September 1st, 1894. Manuscripts, written in French, must be sent before that date to the secretary-general of the society, M. Jacobs, 12 Rue des Petits-Carmes; must be marked by a motto or design, and be accompanied by a sealed envelope bearing a similar mark and enclosing the competitor's name and address. The prize will be the sum of three hundred francs. The subject of the competition for the coming year will be: "Chercher à établir par des expériences personnelles, anatomiques, physiologiques, chimiques, etc., le rôle rempli dans l'organisme par l'écoulement menstruel."

A Tubercular Fistula Terminates an Engagement.—A Glasgow physician is the defendant in a curious breach of promise case. His courtship was progressing smoothly enough until his *fiance* requested his services for treatment of fistula. The trouble was tuberculous origin. He treated the case, but lost his affection for the fair but unfortunate patient. Perhaps if he loses his case, he can offset the damages by a bill for professional services.—*News and Register.*

Prof. KEEN says a good point to bear in mind in diagnosing a case of Chancre is that you will never find chancres on the walls of the vagina, as they always appear on its outlet.—*News and Register.*

Absorption of Silk Ligatures.—Mr. Doran had an opportunity of examining post mortem the pedicle in a case of ovariectomy, upon whom he operated two years previously. The woman died of phthisis. The pedicle had shrunken to a small tuberosity on the left corner of

the uterus. On snipping through its substance, no trace could be found of the silk ligature he had used. The early union of the tissues bulging over the ligature is the first step, then follows the gradual destruction of the silk of leucocytes getting between the fibres. The best material for tying the stump is, in Mr. Doran's opinion, twist silk, not too thick, but at the same time not thin enough to cut a deep groove when firmly tied.—*Pacific Medical Journal*.

Oöphoritis and Mumps.—While orchitis is common after parotitis, inflammation of the ovaries is rare. Dr. Comby (*Progress Medical*) has collected a series of cases in which intense pain and swelling occurred in the ovaries in women with mumps. Boutellier describes a case in which a woman suffering from mumps felt pains in the right iliac fossa, and a tender body, larger than a normal ovary, made its appearance. Inflamed mammary glands are sometimes found intercurrent with mumps.

In Edinburgh and Glasgow the professors filling the chairs of medicine, surgery and obstetrics receive a salary of \$3,000 per annum.—*Maryland Medical Journal*.

The Nineteenth Annual Meeting of the Mississippi Valley Medical Association will take place in Indianapolis, Wednesday, Thursday and Friday, October 4, 5 and 6, 1893. A general session will be held each morning and the afternoons will be devoted to section work. There will be three sections at this meeting, viz.: One on General Medicine, one on General Surgery, and one on Obstetrics and Gynæcology; the last mentioned having been added since the last meeting. An unusually large attendance is expected, in this the World's Fair year. Reduced railroad rates will be provided, further notice of which will be given. Frederick C. Woodburn, No. 399 College Avenue, Indianapolis, is Secretary.

A New Edition of Dunglison's New Pronouncing Medical Dictionary.—The Lee Brothers announce a new edition of Dunglison's Medical Dictionary as in press for early publication. They state that it has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fulness of its definitions, ample explanation being its distinguishing characteristic. In the new edition much encyclopædic information, difficult of access

elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value.

Dr. William Goodell says: "Personally I cannot recall a single case in which a woman has borne a child after having suffered with gonorrhœa. Strumpets rarely become pregnant, for most of them have had this disease."—*Medical Fortnightly*.

Symphyseotomy Preliminary to the Forceps.—Varnier advocates (Obstet. Soc. Paris) that the symphysis be parted first, before applying the forceps to the brim. Especially is this advisable in contracted brim. Pinard reports nineteen cases, in all but one of which the forceps were used after the symphysis had been divided. A case of symphyseotomy and forceps delivery was mentioned by Tellier in which free hemorrhage occurred from an artery which ran behind the pubes and where also the urethra, vulva and perineum were torn. The patient died.—*British Medical Journal*.

Pudic Neurectomy as a Remedy for Masturbation.—Dr. J. S. Eastman publishes in the *Medical News* for August 12th the history of a patient, aged twenty-six, who had been a confirmed masturbator since her sixth year. Coition was without satisfaction and caused her pain. She had run the gamut of internal medication, suturing of the labia majora, electro-cauterization of the parts, oöphorectomy, and clitoridectomy, without relief to her nervous symptoms or to her desire for masturbation. Dr. Eastman, finding one side of the vulva more sensitive than the other, thought that a local paralysis would be desirable. He cut down upon the pudic nerve on the left side, and, finding it hypertrophied, dissected and removed a portion about three inches long. The wound healed promptly, the patient gained in weight, her symptoms disappeared, and a year and a half after the neurectomy she was still free from her vice of masturbation.—*New York Medical Journal*.

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

OCTOBER, 1893.

CONGENITAL DILATATION OF THE URETHRA.

BY W. H. BAKER, M. D.,

Boston.

Having met with a few cases of failure of development of the female urethra which have been erroneously mistaken for an artificially dilated canal, through the effort of copulation, I desire to report an illustrative case. The importance of making a clear and accurate diagnosis of the case may readily be seen, as otherwise much discredit may be brought unjustly upon the patient. This can only be done by keeping constantly in mind the process of development.

In the class of cases referred to the malformation arises from an arrest in the developmental process at between the fourth and sixth month of foetal life. At this time the sinus urogenitalis lagging behind in its growth, the vestibule is likely to be carried considerably back of its natural plane; the urethra itself shortened from one-third to one-half thereby, just at this stage when the urethra being formed as a distinct part different from the bladder, the arrest occurring, we subsequently find, as in the case to be reported; that there is no well-marked sphincteric action at the vesicle neck, and consequently nothing to impede the ready admission of either sound or finger. The size of the urethra in these cases is usually sufficient to admit the little finger readily, and oftentimes the forefinger can be inserted with but little difficulty. This greatly increased size of the canal would seem to be

due to a failure of filling in of the surrounding parts, rather than an increased growth of the urethra itself. This is the more noticeable, as we generally find in these cases a corresponding failure in full development of the vaginal canal which is apt to be small and short, and somewhat wanting in its upward anterior curve.

The appearance about the meatus is first, that it is drawn farther under the symphysis than natural, and second, that it is patulous and its mucous membrane livid, voluminous, and hanging in loose folds about the canal, giving somewhat the appearance of a slightly prolapsed urethra.

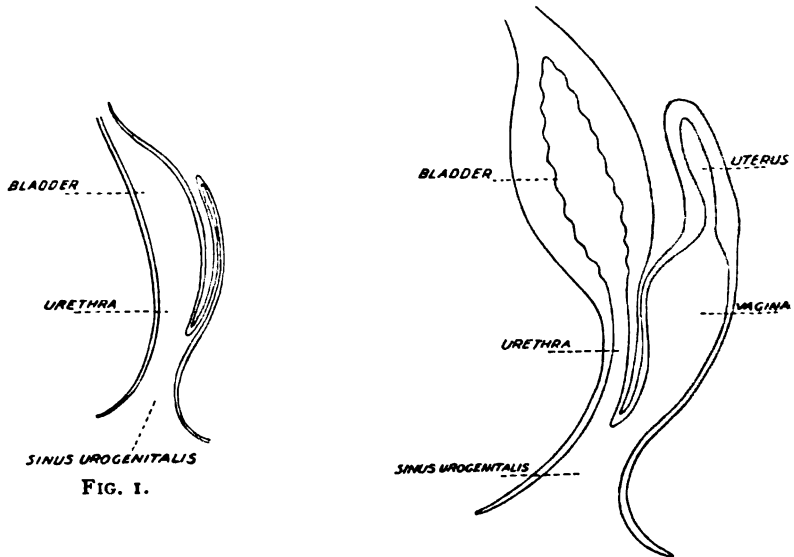


FIG. 1.

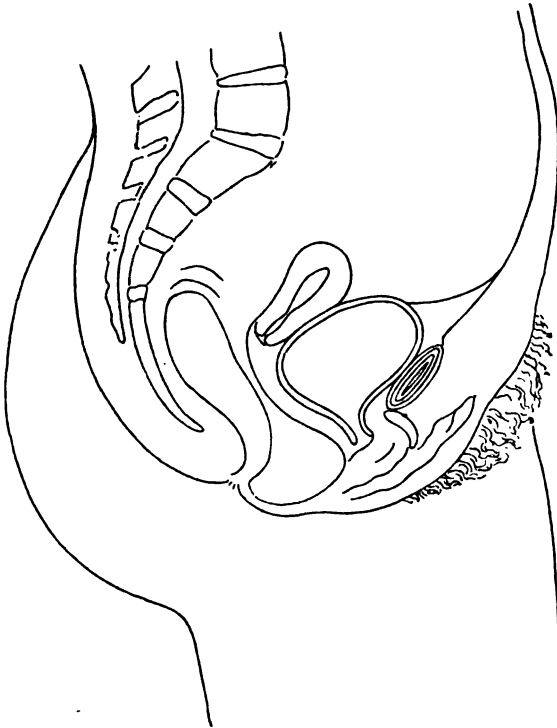
FROM KOLLIKER.

FIG. 2.

On making the first digital examination of such a case the forefinger is more than likely to be inserted into the urethra rather than in the vagina, and this because of the loss of the upward anterior curve, which has thereby carried the meatus farther downward and backward, and more in the line of the vagina at the point of greatest resistance, namely, the thickest portion of the perineal body. In the attempt then to overcome the resistance of the perineum in inserting the finger into the vagina, it is almost of necessity directed into the enlarged urethra. The knowledge of this fact undoubtedly led to the opinion that attempts at coition had dilated the urethra, nor do I doubt that in a married woman with this malformation the direction of force

would rather be into the urethra than in the vagina, but the more delicate membrane of the urethra and the greatly increased suffering occasioned by such coition would naturally lead to its discontinuance.

I desire, however, to correct an impression which I have sometimes heard expressed by members of the profession, that such cases of enlarged urethra are necessarily caused by either some vile practice of the individual herself or else by continued attempts at intercourse.



The case I would report is as follows :

E. W. was referred to the Free Hospital for Women, by Dr. H. C. Haven, April 6, 1891. She was twenty-four years of age, single, and had complained of partial incontinence of urine since her earliest recollection. She had been told by her mother that when a very little child she had fallen down stairs, and to this accident was ascribed the want of control of the urine. She is able to hold urine when sitting and thus quite a quantity will accumulate in the bladder, but loses some

the moment she changes into any other position. If about on her feet a great deal of the urine is lost. Is obliged to wear a napkin constantly. No burning or scalding sensation is complained of as the urine is passed, neither is there any constant desire for its evacuation. Her condition had been no worse or better for the past ten years. There was nothing unnatural in the menstrual process, which began at the age of fourteen. Her family history was good and her own general health excellent. Chemical and microscopical examination of urine revealed nothing abnormal in its constituents.

Physical examination showed the meatus urinarius somewhat back of its normal plane, enlarged, livid, and the mucous membrane of the lower urethra slightly protruding through it. There was a double opening in the hymen, which appeared as two vertical slits in the membrane, one on either side, close down to the base of *libia minora*. Both the urethral and vaginal membranes were very thin, and there was little or no underlying tissue, so that the whole thickness of the urethro-vaginal septum was not more than an ordinary vaginal membrane alone. The length of the urethra could not well be determined, as it was impossible to tell where the urethra ended and the bladder began, there being no sphincteric action at the vesical neck. The vagina was short and small, measuring two and one-half inches in its long axis.

I decided to try and close in the meatus-urinarius by my first operation to a more natural size and appearance, at the same time lengthening the lower portion of the urethra, and by a second surgical procedure to narrow the size of the whole urethra. April 23, under ether I denuded the surface just under and at the lower side of the meatus, also over the whole of the hymen between the vertical openings, and then, having freed the membrane by connecting the two openings, cutting transversely well down to the perineum, I was able to double the hymen upon itself, lifting its lower border well up and over the lower border of the meatus; it being held there by catgut and fine silk sutures. The denuded portion left on the posterior vagina by cutting free the hymen was then covered by mucous membrane stitched transversely, and the patient was put to bed.

In her treatment after the operation there was little of interest to note except that the use of the catheter was avoided, and the vaginal douche was used twice a day from the first, to insure thorough cleansing of the wound and the careful syringing of the same each time the urine was voided.

May 5th. Removed the silk sutures, and patient reports that she has been able to go through the entire night without passing the urine, since the day after the operation and only three times through the day an entirely new experience to her. For a week or two after she was up and about the house. The relief for the incontinence was so complete that it seemed as if the second operation would be unnecessary.

May 14th. By vaginal examination the uterus was found to be in good position. The sites of the operations were perfectly healed, giving quite a normal appearance to the meatus.

The building-up the thickness of the tissues just below the meatus had also brought it forward somewhat from its retrocessed position. On questioning her closely, the fact was revealed that on any sudden jar or very quick motion of the body a few drops of urine would be passed; nor was she always able to go through the whole night without emptying the bladder as she had been for two weeks immediately following the operation.

She was discharged from the hospital with the advice to have faradism applied to the urethra at a point one and one-quarter inches from the meatus, corresponding as nearly as possible to the vesical neck, twice a week for a month.

June 8th. Patient re-entered the hospital with a report that she had experienced very little improvement from the use of electricity, the condition being practically the same as when she left the hospital, May 14th.

June 9th. Under ether the second operation proposed, *i. e.*, narrowing the urethra, was performed. This was done by cutting out a narrow strip three-eighths of an inch wide and one inch long from the whole urethro-vaginal septum, the portion one-fourth of an inch back from the meatus alone being spared; the upper part of the incision was intended to involve the vesical neck. The edges were then brought into apposition and held by silver sutures. The sutures were removed after a week, and the union found to be perfect. She was discharged apparently cured, June 26, then having perfect control of the urine. Some months subsequently she was heard from, and continued to be free from the discomfort she had suffered.

REFLEX BLADDER TROUBLES¹.

BY JOHN N. UPSHUR, M. D.

Richmond, Va.

Professor of Materia Medica and Therapeutics in the Medical College of Virginia; Honorary Fellow of the State Medical Society of West Virginia, etc.

It is chiefly with the vexed question of reflex bladder troubles in women that I propose to deal. The range of causation, in men, is much narrower, being restricted almost entirely to fissure or hemorrhoids or other disease in the rectum and stricture of the urethra. But in women, causes located in the rectum, affections of the urethra, of the uterus and ovaries of various kinds and gravity, or acid urine dependent on gastric derangement. To ascertain the cause, in order that it may be removed, is often a task of extreme difficulty, and one which causes us much mental anxiety and worry. The paucity of literature treating of these affections increases our responsibility, necessitates closer observation, and surely taxes our resources in applying suitable remedies. In investigating these affections we should be careful to remember the relations of the organs located in the pelvis and the constitution of the adjacent and surrounding tissues.

I should be too prolix, did I go into a minute description of the female bladder. I will only remind you of the practical facts that in childhood and old age the vertical diameters of the bladder are the longest and in middle life the transverse. In old age there is a tendency to bagging of the bladder at its inferior fundus, because of the atrophy of the pelvic organs, giving us an explanation of the difficulty experienced by persons advanced in life in completely emptying this viscus when the urine is voided, the residual water undergoing ammoniacal change, and becoming a source of vesical irritation.

The inferior portion of the female bladder which merges into the urethra is funnel shaped, and is the most dependant portion of the bladder. The middle muscular coat of the bladder is denominated the vesical sphincter, and to its contractile power is supposed to be due the ability to retain the water; the internal and external muscular layers are the detrusor of the bladder. The abundant nervous supply, spinal, to the trigonum vesicæ makes it the most sensitive portion of the blad-

¹ Read July, 1889, before the State Medical Society of West Virginia; February 14, 1893, before the Richmond Academy of Medicine and Surgery.

der, the sympathetic supplies the corpus. The vascular supply of the bladder is derived from the three vesical arteries and branches of the uterine, and is very liberal. The veins are numerous also forming plexuses, and emptying into the iliae veins, and these communicating freely with the plexi of the uterus and rectum; from this source arise the affection known as vesical hemorrhoids.

The female urethra is a short canal vascular, *rich in nerves*, and abundantly supplied with elastic tissue, when at rest it is a closed canal.

The existence of any affection of the female urethra may cause vesical distress, but the most common is urethral caruncle, an affection or growth insignificant in itself, yet giving rise to most distressing vesical distress, resembling in appearance a small raspberry and apt to be overlooked, especially if located in the urethral tract near its internal extremity. It is exquisitely sensitive and the vesical distress can only be cured by its complete removal.

CASE I.—Mrs. C.—. consulted me in autumn of '88; complained of intense vesical distress and pain in locomotion; examination revealed a small caruncle in the external orifice of the urethra; excision after local application of cocaine promptly relieved all distress.

Another of the simple causes is found in the presence of thread worms in children and young women, relieved by injection of a strong infusion of quassia. Or you sometimes find great vesical distress present in very young girls even at the age of three or four years, due to acid urine, caused by eating too many sweets, cured by full doses of bicarb. potass., or soda, so as to neutralize the urine. Nor is this form of the trouble always confined to children. A too acid urine or one containing an excess of solid constituents, especially the latter, may give rise to vesical distress, most intense in character and attended by pain in back and down the thighs, weight in lower part of the abdomen, with frequent and distressing calls to empty the bladder, giving rise to a suspicion of some uterine lesion. Inquiry will elicit the fact that the urine is scanty and high colored. The administration of any standard alkaline diuretic, such as acetate of potass. or salicylate of soda and spirit mindererus, which will increase the flow of urine and render it more bland, because of greater dilution of its solid constituents, will bring prompt relief. The existence of fissure or hemorrhoids may sometimes cause great vesical distress, but so soon as these affections are discovered as the cause the indication for relief is very plain.

Pressure from the gravid womb in the latter stages of pregnancy, when many children have been borne, is a common experience with us, and great relief may be had by supporting the heavy organ by a nicely adjusted abdominal bandage. Where there is vesical distress in the early weeks of pregnancy, the cause is to be found in the dragging of an organ increased in weight on the base of the bladder, an hypertrophied womb acting in the same way. Palliation of these causes is to be found in a properly adjusted pessary. In the first instance cure being effected so soon as the womb has risen sufficiently out of the pelvis to be supported without dragging on the bladder, and in the latter, cure comes from reduction of the enlarged organ, by the most appropriate treatment, to its normal dimensions. Another class of cases is found in which both, centric and excentric influences are at work, as for example, a woman for some reason best known to herself, retains her water too long after the call to void it, causing over-distention of the bladder, which in time causes retro-misplacement of the womb, and this constant and long continued disobedience of the calls of nature results in permanent debility of the sphincter and detrusor muscles of the bladder, inability to retain the urine for a long time, and the calls to empty the bladder are frequent, unsatisfactory and incomplete, the residual urine becomes ammoniacal and acts as a local irritant; secondarily there comes a reflex influence from the misplaced womb, first because it is dragging upon the bladder, and secondly because, being misplaced all of the ills due to malposition are liable to occur, and many do coincidently exist, and thus the reflected influence from a de ceased womb adds to the trouble of a debilitated bladder. Where trouble of this kind exists, the prospect of cure is very unpromising.

Miss—came under my care in the Autumn of '86, suffering with distressing vesical irritation, the prominent features of which were frequent calls to empty the bladder, incontinence and unsatisfaction in the act. Patient had passed the climacteric, but being sensitive as to her age I could never learn how many mile posts in life's journey she had passed. Her history was one of disregard of the inclination to void her urine, for a space of two years or more prior to her seeking treatment, being a teacher in the public schools, and her room too remote from the closet to be easily accessible. Physical exploration after failure of several of the most approved remedies showed a misplaced womb, with chronic endometritis, which had gone probably to positive ulceration, evidenced by the muco-purulent discharge irritant

in character. The bladder also evidenced great debility of its muscular coat, and the urethra was somewhat relaxed. There was more or less leakage from the bladder all the time, keeping the vulva more or less excoriated; urinalysis showed negative results as to albumen, casts, or sugar, at times, some mucous and the solid constituents varied. Various methods of treatment were only partially successful or failed entirely. Most relief was obtained first from free curetting of the cavity of the womb, followed by the application of nitric acid, and subsequently free washing out of the bladder with a solution of borax, but the benefit was transitory and recognizing the fact that the patient had reached that period of life when there is some bagging of the base of the bladder and the permanent debility of the muscular coat of the viscus, a conclusion arrived at after faithful trial of all sorts of diuretic remedies, and nervines, she was advised that she must bear her infirmity as best she could, and the case was abandoned.

But the most common of all causes of vesical trouble is in some lesion of the uterus, affecting the bladder, through reflex sympathy, and these cases are cured by treatment directed entirely to the uterus, except perhaps some palliative soothing diuretic, such as Infus. of Hops, uva ursi, flaxseed, etc.

I can best describe this branch of the subject by quoting from a former paper on this subject, forming Chapter VII of a little work on "The Disorders of Menstruation" by myself; "In my experience, endocervicitis, with its consequent granulation, or ulceration, has been more frequently the cause of vesical irritation, perhaps because this trouble is the most frequent with which we have to deal. The point I would make is that *this lesion of the cervix, or laceration, or carcinomatous disease, or in other words any lesion of the cervix, causes, because of its (the cervix) greater nervous sensibility vesical irritation much more frequently than when the disease is located in the corporeal lining, or in the substance of the womb or its appendages.*" To quote again from the same source:—"We have another class of cases which are *emotional*, occurring in those women who are run down, as in school girls, where the nervous system has been over-taxed by study and they have become hysterical and chlorotic; or in married women suffering from sexual neurasthenia, brought on by the abuse of the sexual relation, change of air and scene, and an active ferruginous tonic treatment are the indications in these cases. Now the two classes of cases that we have just discussed are in striking contrast, and demand as we have seen, very different management, with regard to the first we cannot err

if we, in the beginning, make a thorough examination of the womb for trouble which manifests itself by a reflected irritation of the bladder. In the second, we have cases which can only be *aggravated by any local interference whatever.*"

If the vesical irritation be due to uterine causes, benefit may be expected from rest in the recumbent position, but if the *cause center in the bladder*, such as vesical catarrh, etc., this will not be the case. (Goodell). Some very good authorities recommend stretching of the urethra for relief in some intractable cases of vesical irritation, and no doubt this procedure is sometimes, nay often, resorted to empirically, resulting either in no benefit or positive harm. But in some cases the irritability may be due to a crack or fissure about the internal orifice of the urethra, and urethral dilatation in these cases will possibly cure, just as, in rectal fissure, division of the "fibers of the sphincter or paralysis of the muscle by stretching affects a cure." I must candidly admit that I can point out no means by which this affection may be diagnosed, but when vesical irritation is cured by this procedure, it is reasonable to argue that it was caused by some lesion, located about the neck of the bladder, most likely fissure or irritable ulcer. It may possibly be explained by assuming on the other hand that the urethral divulsion cures by reflex sedation of the viscus.

Just here, par parenthisis, let me record my condemnation of harsh injections into the bladder, especially when used empirically, and emphasized when the agent is the nitrate of silver. This treatment is too painful, and is liable to aggravate the trouble. Of the various emotional causes hysteria plays a conspicuous part, but what has caused the hysteria! How necessary a solution of this problem! "In a recent work of Georges Grinan, 'Les agents provocateurs de l'hystérie' the following are given as the exciting causes of hysteria: Moral emotion; attempted hypnotism; nervous shock, as from earthquakes, peals of thunder, injuries; general infectious diseases, such as typhoid fever, pneumonia, malarial affections and syphilis; morbid states characterized by considerable general exhaustion, such as hemorrhages, mental or physical over work, sexual excesses, anæmia and chlorosis; poisoning, either in the chronic form, as with lead, alcohol, mercury, etc., or in the acute, particularly that produced by chloroform for surgical anesthesia; and diseases of the nervous system, such as multiple sclerosis, locomotor ataxia, primary progressive myopathy, and gradual compression of the spinal cord in Potts' disease." The author also recognizes the fact, "That all these causes may produce other nervous

troubles, notably neurasthenia, also a form due to malnutrition of the nervous system, (*New York Medical Journal*, July 6, p. 13). When we recognize all of these causes, and remember in addition that the uterus and appendages when in an abnormal condition may also give rise to obstinate hysteria, the bladder irritable and troublesome as a factor expressive of this condition, we begin to have a faint appreciation of the difficulty of finding out the cause in any special case, and promptly bringing the needed relief.

In this connection I desire to call your attention to a case which gave me an untold amount of worry and anxiety. Miss ———, æt. 23, Jewess, consulted me giving the following history, *i. e.*: For eighteen months or two years she had suffered from frequent and unsatisfactory calls to void her urine, the frequency and distress of the act increasing until now it was almost unbearable, interfering with occupation or comfort during the day or rest at night. She appeared in good health and well nourished. Her menses appeared about sixteen, but had always been scanty, irregular and more or less painful. She did not walk with comfort and could not be long from home because of the frequent and urgent calls to empty the bladder, the desire coming every ten or fifteen minutes, but could be retained longer by the exercise of strong will power. She had at times some leucorrhœa, but it never amounted to anything. Physical examination revealed by inspection, labia normal, urethral orifice free from all appearance of irritation, clitoris rather small, not abnormally sensitive to touch. Digital examination, pelvis roomy, vagina virginal, hymen absent from previous examination made by gentleman under whose care she had been prior to coming to me. Uterus antiflexed and entire organ retroverted, so that os uteri occupied a position looking forward and upward; no thickening of pelvic tissues; right ovary normal; left ovary slightly tender on pressure. By speculum the os simply revealed slight redness and probe entered with difficulty about one and three-fourths to two inches, and discovered tenderness in the cavity. Bowels irregular and movement always accompanied and followed by pain. I thought I had an easy solution of the cause of her trouble in the condition of the uterus, and that to cure the stenosis and rectify the malposition would completely relieve the trouble with the bladder. She took some preliminary treatment in the form of vaginal douches and diuretics by the mouth. I then administered chloroform, and freely stretched the cervix using subsequently applications of iodine to cervical canal and cavity and glycerine balls in vaginal canal. After systematic treatment

of this kind I adjusted a Smith's modification of Hodge's pessary to lift the uterus into its proper position and relieve the dragging on the base of the bladder. There was no relief or amelioration of the bladder irritation, and the periods were if anything more painful than before. I then turned my attention to the bladder itself; urinalysis revealed nothing except a light-colored urine, excessive in quantity, and of low specific gravity (1.005). She now took every variety of diuretic remedy to modify the constituent elements of the urine without avail, and then in desperation, and I confess empirically, I freely stretched the urethra with absolutely negative results. Remembering the irregular condition of the bowels, pain on defæcation, etc., I critically examined the sphincter ani muscle and rectum, expecting to find fissure, or possibly hemorrhoids as a solution of the bladder irritation, during this examination stretching the sphincter ani as freely as possible it being hard and irritable. This procedure was followed by palliation of the bladder trouble for about eight hours, and complete relief of painful and irregular action of the bowels. I now began to feel in despair of finding the cause of the trouble or a remedy. The materia medica was ransacked for something new and the advice of many medical brothers at home and abroad was asked and followed, without avail. Galvano-faradism was faithfully tried, negative pole in the bladder and positive to hypogastrium or hip. Galvanism to spine and uterus, negative pole in cervix, no results. All sorts of suppositories were used in the rectum that gave any hope of relief, but the result was negative. The patient was carefully questioned as to the habit of self-abuse, but indignantly denied having ever been guilty of the act, nor was there any evidence of the habit, no clammy cold hands, everted looks, etc. The painful periods became worse until, I have seen her roll in agony, the suffering being controlled with difficulty by active anodynes. The patient now had been some months under my care and I found one day in examining her spine, a tender spot at junction of lumbar and dorsal vertebra. I also was convinced of the fact that she possessed exalted sexual excitability. This led me to conclude that the cause of her vesical trouble was due to ovarian irritation, and some lesion located in the spinal cord. I never detected any unusual symptoms of hysteria, except an irregular condition of her spirits. I asked that she would keep account of the number of times she voided her urine, amount passed each time, and also aggregate; result, about seventy times in twenty-four hours, 3½ to 3½ss at a time, aggregating nearly a gallon.

Feeling that my time of penance had expired and that some other medical brother stood in need of such discipline, I advised that she consult some one else; accordingly she placed herself under the care of Dr. P. J. Murphy, in Columbia Hospital, Washington, where she remained until July 3d. In a letter from him dated July 2d, he says, "The following is taken from the hospital record, 'Admitted Feb. 27, 1889. Constant desire to urinate; has to get up nine or ten times at night, menses painful and irregular, accompanied by nausea and vomiting; bowels loose, otherwise a healthy woman. Has been under all manner of treatment, galvanism of spine, dilatation of urethra and all kinds of medicine.

"*Examination.*—Uterus non-developed, cervix very small, not longer than the tip of an adult's little finger, complete antelexion at the junction of body and cervix. Urinalysis; acid, sp. gr. 1005, no albumen or sugar, all solids deficient except chlorides; microscope shows nothing abnormal." He adds, "During the time Miss — has been under my observation, she has manifested the exaggerated symptoms of hysteria. From repeated examination I believe that all local interference is detrimental (a conclusion I had come to sometime before she passed from from under my care) to her well being, and that by judicious counsel and occupation suited to her condition she would in time regain her health. I fear that too much doctoring has been done, and in a good measure I attribute her present condition to this peculiar state of affairs. She is, in my opinion, one of those peculiar kind of bodies who pass from the hand of one physician to another, all making tentative strides for her relief and all failing, just as they have failed in the past. For the last two months no treatment has been adopted by me of any kind, except a placebo occasionally to quiet her nervous condition. I fail to find any organic disease that would call for either medical or surgical interference."

July 5th. Patient visited my office, and I made the following note from her own statement. "Menstruation still painful and irregular, but period previous was two weeks overdue. *Left ovary still tender and still have tender spot in spine.* Dr. Murphy ordered massage which brought out a red spot at tender place in spine, when his attention was called to it, ordered massage discontinued. Can go an hour without a call to empty my bladder, am still disturbed at night. If I get nervous or excited, bladder irritation almost as bad as ever."

I therefore conclude, after careful observation and treatment of this case that the cause of vesicle irritation lies in reflected ovarian irrita-

tion, as spinal irritation about the nerve center which presides over the bladder, in performance of the function of voiding its contents.

Dr. Skene in his new work on diseases of women (page 647) says, "The experiments of Kupressau demonstrate conclusively that the nervous center which presides over contraction and relaxation of the sphincter vesicæ is located in the lumbar region of the spinal cord, and it may be accepted that with other functions of a protective nature, the spinal cord maintains the normal action of the urinary organs."

To sum up, this case corresponds in its symptoms, to what Fothergill describes as ovarian dysmenorrhœa. Finally, I have said little of the appropriate treatment of this troublesome affection. To locate the cause is to find the indication for the exhibition of the appropriate remedy. I have found that when gastric derangement is the cause, resulting in an acid, offensive urine, with pain in voiding, the benzoate of ammonia, gr. xv, every two, four or six hours, will sometimes afford very prompt relief, or resort may be had to some other agent which will so modify the gastric condition as to produce a bland and sterile urine. When all else fails resort may be had to drainage either by a self-retaining catheter, if its presence in the bladder can be borne, or by paralysing temporarily the vesical neck by such extreme stretching as to permit constant dribbling, the person for the time being protected by wearing a nicely adjusted urinal; or by an artificial vesico-vaginal fistula. Resort was had to the catheter in the case last recited, but aggravated the trouble. The propriety of the second was long considered and abandoned, because I was convinced that no lesion of the viscus existed and it therefore promised no benefit. This practical fact points forcibly the indication for operative interference.

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THE NATURE OF SHOCK.¹

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Those who have had much experience in abdominal surgery have met and learned to dread that condition known as shock, which may occur after an apparently uncomplicated operation.

It is generally accepted that the sympathetic nervous system is the chief factor in its causation, but how it acts, and what is its condition at this time are points of great importance to determine if we will arrive at correct ideas as to rational treatment.

Shock and collapse are generally spoken of as synonymous terms, but very incorrectly, inasmuch as they are related only in this—that severe shock causes a condition greatly resembling collapse. Shock always depends upon a nervous impression (if I may so term it), while collapse may (and frequently does) result from exhausting discharges. The two may be so intimately blended that it will be difficult to disassociate them, but for purposes of study they should be kept distinct.

I may, for the purposes of this paper, define shock as a condition characterized by a certain train of symptoms (to be mentioned later) and caused by some sudden, more or less violent, impression on the sympathetic system of nerves.

It may vary in degree from the slightest appreciable disturbance to one so profound as to cause instant death.

While the phenomena of shock are always due to disturbed innervation, the causes originating this disturbance may be very varied. They may be mental or physical. The impulse may arise in the brain, spine, cerebro-spinal nerves, or in some portion of the sympathetic system itself. Wherever originating, the impulse is transmitted to the centres of the ganglionic system, and thence distributed.

These causes may be predisposing or exciting. The predisposing causes are

1. A weakened condition of the general nervous system, by reason of which it is easily impressed.

¹ Read before the Am. Asso. of Obstetricians and Gynecologists at its meeting in Detroit, June, 1893.

2. A depressed condition of the system generally.
3. A despondent, apprehensive mental condition.

It will not be necessary to analyze these conditions, as they suggest themselves to all as naturally predisposing to shock. But the influence of the mental condition of the patient is so important as to merit further remark. The effect of sudden fear in producing increased intestinal peristalsis, relaxation of the sphincters, palpitation of the heart, sudden pallor, etc., is familiar to all, and is nothing more nor less than shock—the impulse being mental in origin and transmitted through the cerebro-spinal system to the ganglionic centers. In the same way a feeling of apprehension or dread of an operation, while it may not be of such a nature nor so severe as to cause actual shock, nevertheless so influences the nerve centers as to greatly lessen their resisting power. It is not necessary to cite instances as the experience of every operator will supply them, but I simply wish to emphasize the well-known fact, in order that it may not be lost sight of when we consider the treatment of a patient about to be subjected to an abdominal operation.

The exciting cause, when physical, is always some injury to the nervous system. It may be so slight as to cause no organic change, or so severe as to destroy some portion of nerve tissue. Nor is the severity of the shock proportionate to the degree of injury; for instance, a blow on the epigastrium, or the perforation of an intestine, may cause shock so profound as to cause death, while severe injury to tissues in other parts of the body may not be followed by perceptible shock.

What then is this shock?

It is often described as a paresis of the entire sympathetic system. Again as a paresis of the respiratory and cardiac ganglia. Again as a paresis of the circulatory system. Also as an abnormal dilatation of the abdominal veins. But a consideration of the pathology and symptoms will show, I think, that it is not a paresis; or if so, that the paresis is secondary. There are several facts which weigh against the theory of paresis, either partial or general. First: It is an established physiological fact that paresis of the sympathetic fibres supplying any part will cause *dilatation* of the arterioles supplying that part.

I will here state that I have used the words "sympathetic" and "vaso-motor" interchangeably to a certain extent, because, if the vaso-motor nerves are not technically part of the sympathetic system proper they are so related in function, and so intimately blended anatomically, as to react similarly to stimuli. The vast majority of vaso-motor fibres,

after leaving the spinal cord, pass to their destination through the corresponding sympathetic ganglia, and in intimate union with other sympathetic fibres distributed to the same parts. Irritation of a ganglion stimulates its efferent vaso-motor fibres. An impulse of irritation received by the solar plexus and thence distributed to the various ganglia, is there re-distributed as stimulation to all efferent fibres, vaso-motor and others.

Paresis of the entire sympathetic system would therefore naturally cause dilatation of the arterioles of the entire body, and the surface would be flushed; but these arterioles are contracted and the surface is pale; therefore it cannot be a paresis of the entire sympathetic system.

But if there could be a paresis of the cardiac ganglia, with normal action of the rest of the system, it would hardly explain the symptoms. Though paresis of these ganglia would weaken the heart and thus limit the amount of blood sent through the arterioles, rendering them partially collapsed, the action of the heart would be slower.

The innervation of the heart is from both the sympathetic and cerebro-spinal systems; from the sympathetic through the cardiac branches of the cervical sympathetic, stimulation of which accelerates and strengthens the action of the heart; from the cerebro-spinal through the pneumo-gastric, stimulation of which slows the action of the heart.

Removing normal force through the sympathetic ganglia allows a disproportionate power from the pneumo-gastric which is inhibitory and *slows* the heart's action.

But one of the first indications of shock is disproportionate *frequency* of the heart beat. There is also another point which while not an argument, is indicative of the true pathology. The cardiac nerves supplying the cardiac ganglia, arise from the cervical sympathetic. Now paresis of these branches would in all probability be accompanied by paresis of the other branches of the cervical sympathetic; or at least they would not be abnormally stimulated while the cardiac branches were parietic. The nerve which controls the pupil of the eye arises from the cervical sympathetic, and *stimulation* of this nerve causes *dilatation* of the pupil. In shock the pupil is dilated.

Again—it has been said to be a paresis of the vaso-motor nerves of the abdominal vessels, by which these vessels become greatly distended, and the amount of blood in the rest of the body greatly lessened.

Most of those who hold this view base their belief on the results

obtained by Goltz of Strasbourg, in what is called his percussion experiment.

A frog was taken and suspended in a vertical position with the legs downward and the heart exposed. After waiting a short time till the beats were fairly regular and sent the usual amount of blood into the aorta, the frog's intestines (or the surface of the abdomen) were struck with some violence. The heart immediately stopped. The veins of the abdomen were distended and the upper part of the vena-cava was empty. Soon the heart began to beat vigorously, but remained empty, because it had no blood supply.

But the most careful observers, even while admitting the correctness of the experiment and accepting the conclusions, say that there must be something more, to account for all the symptoms of shock, than paralysis of the abdominal vaso-motors.

A violent blow on the epigastrium of a frog causes distension of the abdominal vessels and emptiness of the veins in the upper part of the body.

In shock, the abdominal veins are distended, but so also are the veins of the entire body, as is shown by the *livid* pallor, so different from the *waxy* pallor of hemorrhage which would be present if the conditions in the man and frog were the same.

Paresis of the vaso-motor nerves of the abdomen cannot explain the symptoms. The splanchnic nerve is the great vaso-motor nerve the abdominal viscera. The greater part of the fibres to the renal vessels are given off from the splanchnic. Claude Bernard and others¹ have found that section (or paralysis) of the renal nerves causes greatly *increased* secretion of urine, because of the increased amount of blood sent to the glomeruli through the dilated arteries. Section (or paralysis) of the splanchnic causes the same condition, but in a lessened degree, because the pressure is lessened by reason of the dilatation of the other abdominal vessels. On the other hand, stimulation or irritation of these nerves, *by* which the calibre of the arteries is lessened, caused *decreased* secretion of urine.

Moreover, any obstacle to the free flow of venous blood away from the kidney, by which backward pressure is increased, causes scanty secretion of urine. In Shock there is greatly *diminished* secretion of urine, therefore it *cannot* be paresis of the abdominal vaso-motors.

The primary pathological condition in shock, is a hyper-irritation of the sympathetic nervous system.

¹ Landois & Stirling Manual of Human Physiology, p. 579.

All involuntary muscles tend normally to rythmical contraction and any disturbance of this rythm is abnormal. Witness the action of the heart; when in health the rythm is the same, though the frequency of its contractions may be varied. So with the uterus, the intestines, etc. That this rythmical action is not confined to involuntary muscular fibre I fully believe, though it is not as easy of demonstration.

It undoubtedly pervades all organs and glands whose action is under the control of the sympathetic system, and is induced by the normal balance between the stimulating action of the sympathetic nerve fibres and the inhibitory action of cerebro-spinal nerve fibres, and is disturbed by a preponderance of either. These two nervous systems are entirely distinct in their functions but are mutually interdependent. They are not only interdependent as to function, but are so intimately blended anatomically as to be almost inseparable. Cerebro-spinal fibres largely enter into the composition of the solar plexus, and generally accompany the fibres sent off therefrom. On the other hand, sympathetic fibres and ganglion cells penetrate the spinal column and traverse the brain.

The function of the sympathetic system is to promote this rythmical action of glands, involuntary muscular fibres, and cells. Stimulation of a sympathetic center increases the action of the parts supplied by its fibres. Stimulation of the fibres supplying the heart and the muscular coats of the arteries, increases the contractile power of those muscles, and lessens the calibre of the arteries and arterioles.

Over-stimulation of those fibres tends to cause *tonic* contraction, and may result in death by spasmodic contraction of the heart.

We can see, by studying the action of the uterus, the mode of action of the involuntary muscular fibre. Under normal conditions, at time of labor, the contractions come regularly at even intervals, beginning at the fundus and passing downward with a wave-like motion till lost in the lower segment. This normal contraction is followed by a period of perfect rest and relaxation. But if the normal stimulus be increased by an excessive use of ergot or external irritation, this rythm is impaired. The contractions become more violent and frequent and lose their normal peristaltic character, tending to become tonic. The period of relaxation is greatly impaired—so much so that often it is represented simply by a little less violent tonic spasm. After delivery, absolutely tonic hour-glass contraction may supervene. The heart acts, under normal stimulation, in the same way.

Landois and Stirling, in their work on Human Physiology, in speak

ing of electrical stimulation of the cardiac nerves, say: "A constant electrical current of moderate strength increases the number of heart beats."

"If the constant current be very strong . . . *the cardiac muscle assumes a condition resembling, but not identical with, tetanus.* (Ludwig and Hoffa). And, of course, this results in a *fall of blood pressure* (Sigm. Mayer)."

Brunton and other experimenters have explained this action by the fact that all non-striated muscles, for instance the muscular coat of the intestines and the uterine muscle, are induced to increased contraction by an excess of carbonic acid in the blood, and vice versa, an excess of oxygen decreases such muscular action. However the explanation may be the fact remains that stimulation of the fibres of the sympathetic system of nerves supplying involuntary muscular fibre tends to cause increased and tonic contraction of those muscles. Thus the heart is not allowed to dilate or relax fully. The rythm may or may not be destroyed, but the muscle contracts powerfully and relaxes scantily. So with the arterioles; their calibre is diminished by reason of this tonic spasm (if I may so term it). So with the intestines—their peristalsis is increased.

But this contraction of the arterioles introduces another factor into the process of nutrition and life. By this contraction the amount of arterial blood supplied to a part is lessened. By this imperfect relaxation of the heart the venous system fails to unload itself, and everywhere it is gorged with blood saturated with carbonic acid. And this is the true explanation of the unnatural distension of the abdominal veins, noticed by many observers. Not a stimulation of vaso dilators, nor a paresis of vaso-motors, but a *stimulation* of the entire "vaso-constrictor" system, by which the entire arterial system is contracted, and the blood of necessity distends the veins.

By reason of this contraction of the arteries and consequent distension of the veins, the cerebrum would not get its proper supply of arterial blood, and its action would be dulled; there would be a condition of mental apathy, and an indifference to external impressions and sensations.

By reason of this hyper-irritation of the sympathetic system, the heart would contract rapidly and would relax very imperfectly. The pulse felt at the wrist would be rapid and small or almost imperceptible. The extremities and surface would be cool, pale and livid; the finger nails purple; the temperature depressed, and respiration slow.

By reason of the general impulse of irritation sent out from the solar plexus, intestinal peristalsis might be increased, and the function of the perspiratory and intestinal glands augmented.

Unlike the kidneys, in which no special secretory nerves have been demonstrated, the sweat glands are supplied with sympathetic fibers whose special function it is to preside over the secretory function.

Stimulation of these fibres produces free diaphoresis of the parts supplied by those fibres without regard to the vascular conditions.

In shock the surface is often bathed in perspiration—nor is the area limited, but the entire body is equally affected—showing irritation of the sympathetic nerve supply to the entire perspiratory system. These secretory fibres almost invariably accompany the vaso-motor fibres, often lying in the same nerve trunk.

It is therefore a fair inference that the *vaso-motor* nerves of the entire system participate in the stimulation which certainly is demonstrated as existing in the *secretory* nerves of the entire *perspiratory* system.

This aggregation of conditions, when induced by an impression on the nervous system is shock; and that impression is of the nature of hyper-irritation.

It is stated in the "Text Book of American Surgery," edited by Drs. Keene and White, that in cases of sudden death from shock the heart has been found *contracted* and *empty*. A condition that we should expect according to this explanation of the pathology. Whether in death from prolonged shock this condition would be found we cannot determine, because it may be that while the irritant action of the sympathetic continues, and the ganglia are continuously stimulated, the heart muscle becomes gradually weaker, and increasingly unable to propel the scanty supply of blood allowed by the imperfect relaxation, or to overcome the resistance of the persistently contracted arterioles, and the heart might finally stop in a condition of more or less imperfect relaxation.

It has been objected that the condition cannot be one of "tonic spasm" of the heart and muscular coat of the arterioles, as in that case the blood pressure in the arterial system would be *increased*. This objection does not take into account the *imperfect relaxation* of the heart, whereby it can receive only a limited amount of blood.

The large arteries have no muscular coat, and they therefore would not be contracted as are the small arteries and arterioles, (which have a well marked muscular coat supplied with a network of sympathetic

ganglia.) Therefore the small amount of blood received by the heart and sent into the large arteries would not be sufficient to distend them perceptibly, and therefore their elasticity would not be sufficient to send a current with force enough to appreciably distend the contracted arterioles, and the blood pressure would not be high, nor abnormally increased.

This is explained by Landois and Stirling in estimating the tension of the pulse—that, “a small pulse occurs when a small amount of blood is forced into the aorta, as from mitral regurgitation,” etc. Again, “Blood pressure is increased with greater filling of the arteries, and vice versa.”

Again, in speaking of electrical stimulation of sympathetic cardiac nerves, as I have quoted above: “If the constant current be very strong the cardiac muscle assumes a condition resembling but not identical with, tetanus (Ludwig and Hoffa) and of course this results in a *fall of blood pressure* (Signr. Mayer).”

How then shall we treat shock?

It will not be necessary, nor shall I attempt to discuss in this paper the action of various remedies. I shall merely endeavor to indicate a certain line of treatment that appears to me to be desirable, and the remedies naturally to be selected are those sedative to the sympathetic nervous system.

These are principally:

1. Nitrite of amyl for its immediate and temporary effect.
2. Morphine (or preferably codeine) for its slower and more lasting effect.
3. The application of moist heat.

The action of nitrite of amyl in dilating the arterioles is familiar to all, as most of you have seen patients on the operating table suffering from severe shock, with an almost imperceptible pulse, rally promptly after the inhalation of nitrite of amyl, the pulse becoming fuller and slower. As to morphine, it must be given in sedative doses in order to get the full benefit from its use. It is known to be a true sedative to the nerve centres, ganglionic as well as cerebro-spinal, and in this way tends to relax spasm and allow the arterioles to dilate normally, thus restoring the vascular equilibrium and relieving shock and its consequences.

In heat we have a most powerful and reliable agent in influencing the circulatory apparatus. I cannot, in the short space of this paper, discuss in any degree its mode of action, but can simply give you some

conclusions arrived at through the researches of others. The skin is, as you all know, a network of arterioles and capillaries, and accompanying these vessels corresponding fibres of sympathetic nerves, regulating their action. In health the application of moist heat to the surface produces a sudden stimulation of the nerve fibres, with corresponding contraction of the arterioles, to be quickly followed by a prolonged period of sedation, whereby the arterioles are relaxed, or dilated, and the skin becomes suffused with blood. Naumann, by a series of elaborate experiments, demonstrated that intense stimulation of the surface by hot water, diminishes cardiac force and activity, dilates the vessels and slows the current. And this is exactly what is desired in severe shock. He also showed that cooling or heating the blood current itself, affects the cardiac ganglia.

That this is practically true has been shown in two cases recently reported as occurring in the practice of Dr. Mundé of New York. Both cases were suffering from profound shock, threatening immediate death. One case was complicated by excessive hemorrhage; in the other there had been no appreciable loss of blood.

In both cases transfusion into a vein of a large amount of water heated to 118 or 120 degrees was practiced with immediate improvement in all the symptoms, and ultimate recovery of the patient.

Thus it seems to be proven that the general application of moist heat to the surface acts—first locally on the nerve fibres supplying the arterioles of the skin itself, relaxing them; and second reflexly through the solar plexus on the entire sympathetic system.

The injection of hot water into a vein accomplishes the same purpose more directly, by acting as a sedative to the ganglia of the heart and arterioles and allowing their muscular fibres to relax.

In accordance with this view of the pathology of shock, I venture to offer the following suggestions:

The physical preparation of a patient about to be subjected to an abdominal operation, must be as thorough as possible. It is well to begin the treatment of the skin and bowels two or three days previously.

When a patient is much prostrated physically, the diet must be as nutritious as possible, and yet such as to leave little residue, up to twenty-four hours before the operation. Any feeling of apprehension that may exist must be quieted as thoroughly as possible. When the operation is begun such haste as is compatible with safety must be made, inasmuch as prolonged anæsthesia adds the element of exhaustion, and the more manipulation there is, the greater the irritation and

the more pronounced the shock. All manipulations must be as gentle, rapid and sure as possible and the operation completed with the least possible violence. The operating room must be warm, the patient's surface not chilled, and the patient finally put into a warm bed with dry warm clothing.

As for medication, nothing in the way of prophylaxis is better than the administration, hypodermically, just before the anæsthesia, of one-half grain or more of codeine. Dr. Stephen Smith, in an article published in the *Medical News* of October 11, 1890, says that for eight or ten years he has prepared his patients for operation by rendering them partially intoxicated. They then have suffused eyes, flushed face and skin, and a slow and full pulse (all indications of a sedative or parietic condition of the sympathetic system) and that he has never, in all that time, had a case of severe shock.

Therefore, for prophylaxis, quiet the mind of the patient and produce sedation of the ganglionic centres.

Shock occurring on the operating table must be met principally by lowering the head of the patient and the inhalation of nitrite of amyl. Mild shock following operation is to be treated mildly—keeping the patient as quiet as possible, warm and free from all annoying or disturbing influences.

Severe shock is to be combatted actively. The most favorable surroundings possible must be secured, with freedom from all annoyance.

The mental condition must be kept as quiet and serene as possible. A free dose of morphine or codeine administered hypodermically (all medicines should be given in this way) with nitro-glycerine and possibly strychnia.

This last drug stimulates the sympathetic system, but it stimulates much more actively the cerebro-spinal system, and may thus, by tending to increase the power of the inhibitory nerves, regulate or control the heart and arteries.

But I think the main reliance must be placed on moist heat. Externally it may be employed in the form of the hot wet pack, or the hot bath; internally by the injection, through the long tube, into the colon, of large quantities of very hot water, thus bringing the heat into very close proximity to the solar plexus. Or in cases where there has been free hemorrhage, or where the patient was, before operation, anæmic and exhausted, transfusion of as large quantity as possible of *hot* saline solution as practiced in Dr. Mundé's cases.

In this way the temperature of the entire blood current is raised, and the ganglia of the heart and arterioles are subjected to the direct sedative influence of moist heat.

This outline of treatment is simply indicative of that line which in my opinion offers the greatest hope of success in the treatment of severe shock.

To sum up therefore: shock is not a general paresis of the sympathetic nervous system, because

1. The entire arterial system is contracted rather than dilated.
2. The skin is moist, or bathed in perspiration, by reason of the irritation of the secretory fibres of the sweat glands, instead of dry, as it would be in pallor of the skin, low temperature and *paresis* of sympathetic fibres.

It is not a paresis of the cardiac nerves and ganglia, because

1. The heart action would be slow, by reason of the preponderance of the inhibitory influence of the pneumogastric.
2. It is not probable that cardiac branches of the cervical sympathetic would be paretic, while other branches were abnormally stimulated; and in shock the pupils are widely dilated by reason of the stimulation of the pupillary branch of the cervical sympathetic.

It is not a paresis of the vaso-motor nerves of the abdominal vessels, because

1. Paresis of these nerves would cause *dilatation* of the abdominal arteries.

Dilatation of the renal artery would cause polyuria, even if accompanied by dilatation of the other abdominal arteries. In shock the secretion of urine is scanty or even suppressed.

- 2d. Dilatation of abdominal arterioles would cause *decreased* peristalsis. In shock peristalsis is often increased.

On the other hand it is *hyper-irritation* of the *entire sympathetic system*—because

1. The skin is pale and livid by reason of *contraction* of the arterioles, because of *stimulation* of their vaso-motor nerves.
2. The heart's action is rapid by reason of *stimulation* of its sympathetic nerve supply.
3. There is scanty secretion of urine by reason of contraction of the renal arteries—the result of *stimulation* of their nerve supply.
4. The skin, though pale and livid, is bathed in perspiration by reason of *stimulation* of the secretory nerves of the glands.
5. The pupils are dilated by reason of *stimulation* of their sympathetic nerve supply.

6. The pulse at the wrist, while rapid and small, as would be expected in vaso-motor stimulation, is soft and *very compressible* by reason of the very scanty relaxation or dilatation of the heart.

7. The condition of the heart may not have been actually demonstrated, but may justly be inferred by analogy—reasoning from the action of the uterus under similar conditions.

Each contraction of the uterus is normally followed by a period of perfect relaxation, as is the heart. Over-irritation or stimulation of the uterine ganglia or sympathetic nerve supply causes *rapid* contractions, with *very imperfect relaxation*.

It is fair to infer the same condition in the heart under similar causation.

Thus the supply of blood thrown into the arteries is scanty, and arterial blood pressure is *low*.

8. The first five of these conclusions are justified by well-known experimental demonstration. The 6th and 7th are fair conclusions by reasoning from analogy.

9. That the condition of the heart is one of stimulation rather than paresis, may be considered demonstrated by the fact that in cases of sudden death from severe shock the heart has been found *contracted and empty*.

Admitting the correctness of this pathology, it follows that our treatment should be on the line of *sedation* to the sympathetic system—as by nitrite of amyl, nitro-glycerine, morphine, and the application of moist heat:

1. To the surface.
 2. Through the long tube into the colon.
 3. Transfusion of saline solution at a comparatively high temperature.
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PAUL F. MUNDÉ, M. D.

NEW YORK JOURNAL OF GYNÆCOLOGY
AND OBSTETRICS.

SERIES OF EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA.

PAUL F. MUNDÉ, M. D.

Paul Fortunatus Mundé was born in Dresden, Saxony, September 7, 1846. When he was three years of age his father, a political refugee, brought him to this country and he spent his early boyhood at Florence, Massachusetts. He received part of his education at home and also at the Boston Latin School, and began the study of medicine at the Yale Medical College in 1863. Dr. Mundé's activity of mind and body, which thirty years have not impaired, would not permit him to confine his attention to the beaten paths of medical study and we find him in 1864 serving for six months as acting medical cadet. After he was graduated from the Harvard Medical College in 1866, he went abroad and served on the Bavarian side as volunteer assistant surgeon in the war between Prussia and Austria and South Germany in 1866. In 1867, he became resident physician to the Maternity in Würzburg and assistant to that giant among German gynæcologists, Scanzoni. To this association was probably due the bias to the study of gynæcology and obstetrics which afterwards induced him to devote himself exclusively to these subjects. After remaining in this position at Würzburg for three years, he volunteered his services for the war just declared between France and Germany, and was commissioned with the rank of Battalion Surgeon First Lieutenant in the Bavarian army. He served during the war and spent five months in camp before Paris and was mustered out at the close of the war. After nearly a year in Vienna and another at Berlin, London, Edinburgh and Paris, Dr. Mundé returned to this country and settled in New York, where he first devoted himself to general practice, but gradually restricted himself to gynæcology and consulting obstetrics. In 1874 he became editor of the *American Journal of Obstetrics*, and performed the onerous duties of this position for eighteen years. On January 1st, 1892, his other duties forced him to retire from the editorship. He is Professor of Gynæcology at the New York Polyclinic and at Dartmouth College (the latter a summer term), gynæcologist to Mt. Sinai Hospital, consulting gynæcologist to St. Elizabeth and the Italian Hospitals, Fellow of the American, British and German Gynæcological Societies, and of the New York Obstetrical Society, Corresponding Fellow of the Obstetrical Societies of Edinburgh, Leipzig and Philadelphia. His contributions to medical literature have been very numerous,

comprising one large book (Minor Surgical Gynæcology, 1880 and 1885, translated into French), a revision of Thomas' Diseases of Women (Thomas and Mundé) 1891, and about one hundred journal articles. Of the latter may be mentioned the following:

The Treatment of Cancer of the Uterus with the Sharp-edged Scoop, or Curette, 1872; The Cranioclast as Improved and Used by the Vienna School, 1873; Obstetric Palpation, 1875; A Case of Presumptive True Lateral Hemaphrodisia, 1876; The Value of Electrolysis in the Treatment of Ovarian Tumors, 1877; The Dull Wire Curette in Gynæcological Practice, 1878; The Indications for Hystero-Trachelorrhaphy, 1879; Prolapse of the Ovaries, 1879; The Curability of Uterine Displacements, 1881; The Immediate Removal of the Secundines after Abortion, 1883; Secondary Puerperal Hemorrhage, 1883; Non-Puerperal Pelvic Lymphadenitis and Lymphangitis, 1883; Interstitial Cervical Fibroids as a Cause of Distocia and their Removal by Vaginal Enucleation, 1884; The Proper Limitations of the Operation of Complete Vaginal Hysterectomy for Cancer of the Uterus, 1884; Electricity as a Therapeutic Agent in Gynæcology, 1885, (translated into French and Russian); The Treatment of Pelvic Abscess in Women by Incision and Drainage, 1886; Alexander's Operation, with report of twenty-one Cases, 1888; The Flap-splitting Operation for Lacerated Perineum, 1889; Chronic Endometritis and Vaginitis, 1889; The Surgical Treatment of Extra-peritoneal Pelvic Effusions, 1892; Oöphorectomy for Hystero-Epilepsy, 1892; The Conservative Treatment of Salpingitis, 1892; Abdomino-Pelvic Fistula after Coeliotomy and Laparotomy, 1893.

As might be inferred from his birth and education Dr. Mundé had at the commencement of his career a strong leaning toward German ideas and methods, but he soon became an ardent advocate of American methods, and he has also that quality—which though it cannot be claimed to be exclusively Teutonic has added lustre to the fame of German physicians—the ability to discuss scientific questions with warmth without acrimony. Dr. Mundé is a fluent speaker, a ready writer, and his social qualities together with a bearing which impresses one with his honesty of purpose, make him a popular man in the profession.

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EDITORIAL.

ANCHORING MISPLACED ORGANS.

The abdominal and pelvic organs are held in position by folds of peritoneum, their vessels, nerves, and by connective tissue. They are more or less movable and the disturbance caused by an abnormal increase in this mobility may be very great. This mobility is of the utmost importance to some of these viscera and doubtless serves a useful object in all, but when the supports become sufficiently stretched to permit of abnormal motion symptoms arise which may be slight or which may point to a quickly approaching fatal result. When the supporting structures become stretched sufficiently to permit the viscus to move about like a melon on its stalk it is called a "wandering" organ. Examples of this condition, while they are not common, are met with from time to time, by all pelvic and abdominal surgeons, and we have been able to acquire an accurate picture of the symptoms of this condition from clinical study. In the exaggerated conditions where the pedicle is very long the symptoms arise from four causes:

First. From degenerative changes in the organ impairing its function.

Second. From dragging on its supports from increase in weight or in consequence of its attachment to other organs.

Third. From mechanical interference of pedicle with other viscera as in the case of the wandering spleen or kidney or from strangulation of its contents by loops or sharp bends.

Fourth. From reflex disturbances.

The viscera most commonly affected by this form of exaggerated displacement are the stomach, intestines, kidney, spleen, uterus and ovary. Prolapse of the intestines has been considered by the writers on the practice of medicine to some extent. A single kidney with a very long pedicle may be removed if the other is in a sound condition. In case of the spleen this organ has been removed in a like condition without any serious after-results. The ordinary methods of treating the uterus in this condition are well known to the readers of the Journal and need not be referred to.

The ovary is fully entitled at times to the designation "a wandering organ." It can be retained in its normal position by the same methods as are used with other organs; it has this peculiarity, that the cause of the displacement may frequently be removed. It is usually dragged out of its position by an increase in weight due to cystic degeneration or to traction on it by a displaced uterus. In the former case the ovary can often be reduced to its normal size by puncturing the cysts with a needle and, in the latter case, by restoring the uterus to its normal position.

While exaggerated examples of misplaced organs are well known they have not received the attention they deserve. This is shown by the remark of one of the leading consulting physicians of this country in a recent discussion before the New York Academy of Medicine :

"There has been a great deal said about movable kidneys to night, and from what I have heard I should think it was a very common affair. Some three years ago I asked at Bellevue Hospital to make a special examination in regard to the condition of the kidneys, and the report thus far that I have received is that only three movable kidneys have been found on the autopsy table. You can imagine how many autopsies have been made, but either kidneys get into their normal position so well at the death of the patient that they are not recognized at the autopsies, or else they are not as frequent as we are led to suppose. I only make the statement. I have nothing to say about it more than that."

Slighter degrees of displacement may cause much distress, and failure to recognize them has been the cause of useless mutilation of other organs.

In *La France Médicale* No. 29, for July 1893, Richelot reports an interesting case of displacement of the liver. The condition was characterized by a movable tumor in the iliac fossa, which was at times

painful, and there was also bilious vomiting and elevation of temperature. He replaced the organ and, after treating the adhesions, "anchored" it in position by catgut to the abdominal wall.

We call attention to this field which promises to be a fruitful one and particularly wish to draw attention to the claim of those who believe that a movable organ may be displaced to a degree sufficient to give rise to symptoms and yet not enough to attract the attention of the pathologist in the dead-house.

The subject is a broad one, and we expect that it will receive more attention in the future than it has in the past.

REVIEWS.

PATHOLOGY AND THERAPEUTICS OF DISEASES OF WOMEN. 3d ed. By
Dr. AUGUSTUS MARTIN, Berlin.

We find this edition like those of previous date, a very readable book. It portrays the views of the author quite fully, which are in some respects not acceptable to specialists. It is not intended as a text book, but as a concise clinical work on gynæcology and it fills this place admirably. The illustrations are, with the exception of some microscopical illustrations, fairly good, and must be considered clear.

In the divisions on the topographical anatomy of the pelvic organs and subsequently throughout the book the designation SACRO-uterine ligaments, which we regard as a misnomer, is retained. Again he considers that the pelvic floor *alone* is the pillar and carrier of the uterus, with which we also disagree.

In the chapter on *DIAGNOSTIC vaginal operations*, he pertly remarks that dilation of the cervix is rarely required in the sense in which it is usually meant; one can obtain more satisfactory results in a more simple manner with the sound and curette. If he desires to introduce the finger into the uterus, to thus examine the interior, a dilator is used, but after tying the uterine arteries temporarily, the cervix is split bi-laterally, and after examination the cut surfaces are closed again with catgut sutures.

In the paragraph on curetting of the uterus, it is noted that no matter how much care is used it will occasionally occur that the curette will pierce the organ but this has never been followed by any serious

mishaps if the operation be stopped at once. This is fully confirmed by us.

It is to be commended that the author teaches the full opening and complete emptying of accumulations from *atresia* of the genital tract. He correctly remarks that a small opening and a gradual emptying of such an accumulation is more dangerous than the course pursued by him. The kind of incision in hymenal atresia is immaterial.

The treatment of amenorrhœa caused by atrophy of the uterus with intra-uterine stems deserves condemnation ; although in all other intra-uterine treatment sufficient care is exercised, so much greater is our surprise that the author TEACHES stem treatment *with permission for the patient to travel whilst wearing the instrument*. More can be accomplished and with greater safety by the intra-uterine application of the Faradic current.

Shortening of the round ligaments for the relief of *mobile retro-flexion* is not looked upon favorably. Our experience has shown us *excellent* results, but the teaching that it is comparatively seldom that such case requires operation is worthy of imitation by all teachers and operators.

In clearness and excellence the chapters on the operative treatment of prolapsus uteri and perineal tears, leave nothing to be desired. We are glad to see that in primary perineorrhaphy it is recommended to place the patient upon a *table* and to do the repairing with as much care in details as is used in the secondary operation.

In Endometritis, electrotherapeusis is condemned as not giving satisfactory result. Curetting with subsequent local applications is advocated as giving the best results.

The occurrence of *acute metritis* is doubted as due to gynæcological interference, but is rather attributed to a septic infection induced at this time. This coincides with our view.

In the treatment of *chronic metritis* various sitz-baths at variable temperatures are highly praised by the author, and precautions are given for the use of iodoform in the vagina, owing to the frequent observance of intoxication in his hands. He also advises against the local treatment of patients while in health resorts.

Myomata. As an indication for operation this author takes into consideration the social position of the patient. Electrolysis has been given up entirely because of the negative results obtained so far as curative influence is concerned, and because of the serious consequences produced in some instances.

Preference is given to *complete* abdominal hysterectomy, if the case is unsuitable for myomotomy alone. It is remarkable how soon, subsequent to an operation of such serious nature, such patients are permitted to leave their bed, viz., from twelve to fourteen days.

His reason for this, as he explains in the chapter on the after-treatment of laparotomy cases, is the tendency to the formation of thrombosis in patients with abdominal tumors of all kinds; when compelled to remain in bed a long time this tendency is increased. He lost a case from embolism, after practical recovery.

Then he says on page 264, with suitable precautions the usual reflex symptoms which follow removal of the pelvic organs rapidly disappear. He leaves the reader in the dark as to what the precautions consist of and the appropriate treatment when they occur is not pointed until the chapter on castration is reached—on page 499 the treatment is delineated. [Despite the measures there advocated, which are probably in general use, we have seen this class of patients suffer several years from one or more of these reflex symptoms]. We also miss, in the description of the intra-peritoneal treatment of the pedicle, Baer's method of placing the ligatures. This is so far superior to any other, if the respective case permits of its use, that it should not be missed in any new text-book on this subject.

In addition we miss the mention of sarcoma uteri deciduo-cellulare described by Sängner and Gottschalk among the *malignant neoplasms of the uterus*; one case of which has also been observed by us.

The adenomata are placed in this chapter, and although this is not correct from an anatomical standpoint, from a clinical view it is right that they should be so considered.

In the paragraph on cancer of the cervix, the time of its existence from first observance of the disease to its fatal termination is mentioned as varying between nine weeks and five years. Seemingly the author finds a probable connection between syphilis and malignant disease of the cervix. The method employed by him in operating on the so-called inoperable cases is excellent. Stress is laid on the better ultimate prognosis in cancer of the corpus than other varieties.

We find that local treatment in *vesico-vaginal fistula* is resorted to rather extensively before operative interference is taken into consideration.

In *incontinence of urine* Fluid Ex. of Golden Seal is highly praised.

The pathology and symptomatology of cervical lacerations is dealt with much better than is generally the case in German works.

H. J. B.

STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M.D.

Preliminary Report on Gonorrhœa during the Puerperium.

KRONIG (*Centbl. für Gyn.*, 1893, No. 8) was enabled to find gonococci in the lochia of nine women during the puerperal period. The gonococci were found as early as the first day, reached their maximum number between the fourth and sixth days, and rapidly diminished in number during the next few days. With the exception of one case all the patients had fever, though of a moderate degree in four cases, and high fever (104°) in the remaining four. Seven of the patients were entirely free from fever on the fifteenth day, but a purulent uterine discharge continued, and the uteri were found poorly subinvolved. In two cases trouble was manifested late in the puerperium. In the one case which was discharged on the fourteenth day the patient returned two weeks later with a pelvic exudation on the left side. In the other case on the fourteenth day there was an effusion in the right elbow joint, considerable fever and an exudate the size of a hen's egg in the right parametrium. The author makes the following deductions from his cases.

(1.) Women affected with gonorrhœa may have, post partum, an extension of the disease to the uterine cavity. In these cases there will be found a decided increase of the gonococci in the lochial discharge.

(2.) Gonorrhœal infection of the uterine cavity of itself may produce fever during the puerperal week.

(3.) Whether this fever is the result of infection with gonococci alone or in combination with other pyogenic cocci the author has no data to determine.

(4.) Gonorrhœal infection during the puerperium cannot be considered directly as a fatal disease, still it often leads to late puerperal affections through extension of the process to the tubes and parametrium.

Contribution to the Study of Atrophy of the Uterus.

GOTTSCHALK (*Saum Klin. Vorträge, N. F.* No. 49 *Centbl. für Gyn.*, 1893, No 12), discusses first physiological uterine atrophy and dwells par-

ticularly upon lactation atrophy, which he considers as a mere variety of the changes that occur during gestation, labor and the puerperium. The atrophy occurring in galactorrhœa must be looked upon as reflex irritation conveyed by the nerves of the mammæ to the uterine nerves. The prognosis is favorable, as also the fertility providing lactation is not continued for too long a period which might entail changes which would be permanent. He divides pathological atrophy into two forms, primary and secondary. To the primary form belong all those cases resulting from endometritis, and those that might be characterized as pressure atrophy, for instance as in cases of subserous fibroids, masses of exudation, hematoma, etc., and those cases following psychical effects.

Secondary atrophy follows disease of other organs, such as the tubes and ovaries, and general affections. Of the latter chlorosis and anæmia play a very important role, and atrophy often accompanies tuberculosis. Of the infectious diseases puerperal fever is particularly known to be followed by uterine atrophy though the other forms of infectious diseases play an important factor. For instance the author observed it to follow directly or indirectly twelve times after scarlatina, eight times after typhoid and four times after articular rheumatism.

Commonly these affections are attended with only a temporary atrophy which disappears without any local treatment but it may become permanent as a result of inflammatory processes in the ovaries and destruction of the follicles. In these cases the sooner the condition is detected and the ovaritis subjected to appropriate treatment the better will the prognosis be. The symptoms of atrophy consist at first of general complaints. Local disturbances such as discharge, bearing down, difficulty in locomotion, etc., manifest themselves only later. On examination the uterus is found markedly flaccid. The muscular tissue on friction is only slightly responsive, the thickness of the walls are much below the normal. Later on the organ will be found smaller and possessing abnormal mobility. Still later, the ovaries, vagina, external genitals, and breasts will be found atrophied.

In secondary atrophy the principal object of treatment will be to strengthen the whole system and allay the general symptoms. In the primary form local treatment is of most service and must be directed to combat the pathological condition. For the amenorrhœa, scarifications, methodical sounding, hot douches, electricity, massage and internally santonin and per-manganate of potash will especially be found efficacious. After all acute infectious diseases one should always pay

particular attention to the state of the ovaries so that timely treatment could be instituted, for it is from this source that the greatest danger of chronic and incurable uterine atrophy arises.

Bacteriological Examinations of Pathological Conditions in Gynecological Affections.

E. WITTE (*Zeit. für Geb. Bd XXV Hft 1*, and *Centbl. für Gyn.* 1893, No. 13), in Martin's clinic examined bacteriologically the contents of thirty-nine cases of pyosalpinx immediately after coeliotomy. Positive results were obtained in twenty-four cases. In seven cases gonococci were found, in four cases without any other microbe. In four cases the pneumococcus lanceolatus was detected. In eight cases the disease followed the puerperium and in four of these microbes were found, in two streptococci and staphylococci and in two streptococci longus conglomeratus and short bacilli. The examinations emphasized the difficulty of detecting the gonococcus with the ordinary cover glass preparations and the great value in these instances of Wertheim's method.

Cauterization of the Uterus with Chloride of Zinc Pencils.

Kochenburger (*Centbl. für Gyn.*, 1893, No. 14), read a paper on this subject before the Berlin Gynecological Society. In cases of obstinate uterine hemorrhages without malignant diseases the introduction of a chloride of zinc pencil is frequently attended with good results. The whole endometrium with some of the underlying tissue is cast off *en masse* and amenorrhœa results in consequence. The objections raised against its use were:

- (1.) That atresia might occur without amenorrhœa and menstrual retention result.
- (2.) Hypertrophy of the uterus might follow the treatment (Mackenrodt.)
- (3.) Injections of fifty per cent. chloride of zinc or pencils of it may increase the hemorrhage by some of the fluid passing into the tubes and eroding some of the blood vessels (Dührssen).

Schultze's Method of Resuscitation of deeply Asphyxiated Children.

B. S. SCHULTZE (*Centbl. für Gyn.*, 1893, No. 15) undertakes to defend his method from two indirect attacks furnished by the reports of two autopsies in children that had been subjected to it. In the one

autopsy made by Prof. Körber in addition to several blood extravasations in various organs there was found a rupture of the liver to which the fatal termination was attributed. In the second case by Koffer there was a fissure of the base of the skull probably caused by the application of forceps. The child lived for seven days and then died suddenly. At the autopsy there was found a ruptured subserous hematoma of the liver and to this the sudden death was attributed. Schultze quotes Rokitansky, Förster and Weber as to the frequency of congestion of the internal organs and rupture of the liver in the asphyxiated newly born and that death is often due to this pathological lesion. He claims that one of the advantages of his method is that the necessary manipulations relieve the internal congestion by producing emptying of the right heart and where death follows it is not due to the manipulations but to the lesions induced by the asphyxia. But he admits that contra-indications do exist and one of these is fissure of the base of the skull, another being a very heavy child which the operator might find difficult or impossible to swing owing to lack of muscular strength.

Primary Epithelioma of the Tube.

Dr. A. RONTIER (*Am. de Gyn. and Obst. and Der Frauenarzt*, May, 1893), reports a case of this very rare condition. The patient was sixty years of age and had menstruated regularly from her eleventh to her fiftieth year. About two years ago her abdomen began to swell and one night she had an attack of pain attended with copious discharge of a light yellowish fluid from the vagina. The pain then ceased and the abdomen grew smaller. When seen in November, 1892, the diagnosis of an ovarian cyst was made and laparotomy was performed. The sac was found to contain about one and one-half litres of darkish fluid and consisted of the uterine end of the tube which on microscopic examination showed to be the seat of epithelioma.

GYNÆCOLOGY IN SCOTLAND.

By J. D. BISSELL, M. D.

UTERINE ROTATION: ITS CLINICAL IMPORTANCE IN PREGNANCY AND LABOR¹. By J. H. Ferguson.*(Concluded.)*

Rive and Spiegelberg are the only authors who mention anything about pain in the third stage of labor. The former says, in speaking of expression of the placenta: "The most serious of the inconveniences of this proceeding is certainly the pain produced—a pain which sometimes becomes tolerably acute if expression be practiced for a long time." Neither Rive, however, nor any other writer says a word in connexion with the pain. The only way to avoid including one or both ovaries during the third stage is to grasp the uterus antero-posteriorly and avoid its lateral borders. In no description of Credé's method is this point clearly stated. To avoid grasping the ovaries and to make sure of grasping the uterus antero-posteriorly, the hand should be passed obliquely into the pelvic brim, and as in about 90 per cent. of cases the uterus is rotated to the right, the ulnar side of the hand should be pressed deeply down in the direction of the left sacro-iliac synchondrosis, while the thumb should be behind the right ilio-pectineal eminence, the fundus of the uterus resting in the hollow of the palm.

Such a grasp will generally avoid the ovaries, and firm compression can be made without causing much pain or inconvenience. The reasons why the ovaries are not more frequently injured in the management of the third stage of labor are:—

(1) The uterus has usually been grasped obliquely as above described, though the fact has not hitherto been recognized. When a patient is lying on her left side in the usual position, the operator's hand involuntarily grasps the uterus in an oblique direction; grasping it in any other way involves a twisted and constrained position of the hand, which would prevent the bringing into play of any degree of muscular force. If the patient is lying on her back, the hand will naturally sink into the pelvis obliquely.

¹ Read before the Obstetrical Society of Edinburgh on 11th Jan. and 8th Feb., 1893.

(2) Often in grasping the uterus in the third stage the accoucher will change his grip because a pain is provoked. This change of position relieves the patient and enables firm compression to be made, the ovary no longer being pressed upon.

(3) In the majority of cases no great pressure is requisite in the third stage; the employment of the hand being simply a precautionary measure for the purpose of detecting and preventing relaxation of the uterus. If a patient should complain of severe pain during the manipulation of the post-partum uterus, one should always fear that the ovaries are being compressed at the same time.

The injury inflicted on the ovary may not be, and seldom is, so great as to produce shock, but it may perhaps account in some measure for some of the low forms of inflammation and other pathological conditions so frequently met with in the ovaries as a result of the puerperal state.

Other Causes of Post-partum Shock.

A tedious and unusually painful labor may sometimes account for shock, especially if there be much instrumental interference. The nervous system after a severe labor is depressed by pain, starvation and a loss of sleep. Inversion of the uterus occurring post-partum may also cause shock. Rupture of the uterus usually shocks the patient before death puts an end to her sufferings. Injection into the uterine cavity after labor is sometimes followed by an alarming condition of shock, caused, probably, by some of the fluid regurgitating through one or both Fallopian tubes. Where it is necessary to wash out the cavity after labor, the uterus should be grasped laterally, for the purpose of compressing the Fallopian tubes.

Conclusions.

1. The uterus is usually rotated on its longitudinal axis, and becomes more so in the latter months of pregnancy and during labor. In the third stage of labor the transverse axis of the uterus often corresponds to the oblique diameter of the pelvis.
2. In the majority of cases this rotation is to the right.
3. The ovaries in pregnancy are in close contact with the lateral walls of the uterus.
4. The uterine rotation consequently causes one ovary (usually the left) to lie forward toward the middle line, and the other (usually the right) to move backward.

5. The ovaries have a rich, ganglionic, nervous supply, derived chiefly from the sympathetic system.

6. The ovaries are enlarged and congested during pregnancy, and slight pressure upon them gives rise to pain.

7. Any strong irritation of the peripheral, sensitive nerves or of the sympathetic nerves, is capable of engendering a series of constitutional phenomena collectively known as "shock."

8. There are certain cases where alarming manifestations of nervous prostration and insensibility supervene, that can only be accounted for by injuries inflicted on one or both ovaries in the management of the third stage of labor.

9. Analogies are to be found—(1) in cases of ovariectomy, where, if these organs be much bruised in the process of removal, symptoms of shock at once show themselves; and (2) in shock which so frequently results from injuries to the testicles.

10. That the uterus must be grasped antero-posteriorly as regards itself and not the pelvis.

11. The hand must be placed obliquely in the pelvis and then it will grasp the uterus utero-posteriorly.

12. The left hand naturally sinks into the pelvis obliquely, so the ovaries escape danger.

13. If a patient should complain of much pain during the manipulation of the return in the third stage of labor, the grasp of the uterus should be changed.

14. The only condition in which the post-partum return should be grasped laterally is in the operation for washing out its cavity.

15. Post-partum shock may be due to other causes besides injury to the ovaries.

NOTE ON THE QUENCHING OF THIRST AFTER ABDOMINAL OPERATION.¹

By Charles W. Cathcart.

The nutrition of the patient after an abdominal operation is maintained partly by small supplies from without, given as nutrient suppositories or enemata, and partly by drafts upon the reserves of fat stored up in the patient's body. Water, however, is not stored up like fat, and, therefore, patients who are cut off from it suffer greatly from thirst, as the excretory organs constantly drain away the water which exists in the connective tissue. The custom has been in such cases, to put off

¹Read before the Edinburgh Medico-Chirurgical Society, June 7th, 1893.

the patient's requests for drink with an occasional sip of hot water, a morsel of ice, or the corner of a wet towel. As the absorptive power of the rectum and colon is very great, these again can be utilized for the purpose of re-supplying the system with water and quenching thirst. The fluid used should be either pure water or three-quarter per cent. saline solution. To secure its absorption the quantity injected should not be larger than one-half to one pint. It should be about the temperature of the rectum, and should be injected very slowly. In twelve hours thirst will be much subdued and bearable; in twenty-four hours greatly relieved.

In discussing the paper, Mr. A. G. Miller said that he thought the colon was a more actively absorbing portion of the bowel than the rectum. He recommended that a large quantity of water be injected at once instead of small quantities frequently. The fluid then reached the colon and was more likely to be retained and absorbed.

Dr. N. T. BRENIS said that his experience corroborated Mr. Cathcart's paper. He recommended in addition, six grains and then four grains of calomel every three hours until flatus was passed. Such doses did not salivate to any extent, but rendered the mouth more moist.

GYNÆCOLOGY IN ENGLAND.

BY WM. R. PRYOR, M. D.

The address in Obstetrics and Gynæcology before the 61st Annual Meeting of the British Medical Association was delivered by C. I. Cullingworth. The author is Obstetric Physician and Lecturer on Midwifery and Diseases of Women, St. Thomas Hospital. His subject was on "Pelvic Inflammation in the Female and the Pathological Significance of the Fallopian Tubes Therewith." It is a masterly effort. Not only does it epitomise nearly all we knew on the pathogeny of tubal diseases and their treatment, but also is it as well an exhibition of the unselfish forgetfulness of self in the treatment of a subject in which the author has done pioneer work. In not one line may the reader see the advertisement of Dr. Cullingworth's skill; nowhere may he meet the excellence of Dr. Cullingworth's method contrasted with that of his less fortunate brother.

In these days of indirect advertisement it is pleasing to some, humbling to others, to read his address. While giving credit to all who have thrown light on the pathogeny and treatment of tubal disease, the author fails only in that he omits all mention of those methods of treatment of peritonitis which aim to save the sufferer those gross lesions in the adnexa which so often require the radical procedure of cœliotomy.

The author may almost be forgiven this in the utterance of one opinion: "The scope of Battey's operation—that is, the operation for the artificial induction of the menopause, never very wide, has become narrower and narrower as experience has increased, and is now practically restricted to the treatment of certain cases of uterine myoma. As a means of relieving neurotic conditions, it is so terribly open to abuse, it raises so many difficult questions that are better left undisturbed, and it has proved so uncertain and disappointing in its results even when legitimately applied, that it is now thoroughly, and, in my opinion, properly discredited."

In simple words and by the citation of but a few cases, the author draws forcibly contrasting pictures of the results of delay and palliative methods and those of operative interference.

If there be error in the address, it is that the author fails to notice those methods of treatment which aim to save to the individual organs essential to his economy—methods called conservative, but which are practiced by those who are noted for boldness and success in abdominal work. After reading the address one may well endorse the statement of the *British Medical Journal* that "the choice of Dr. Cullingworth to give the address on Obstetrics has been fully justified by the results."

TRANSACTIONS OF THE OBSTETRICAL SOCIETY OF
LONDON.

NOTE SUPPLEMENTARY TO A PAPER READ BEFORE
THE SOCIETY APRIL 2ND, 1890, ON "VAGINAL
HYSTERECTOMY," GIVING THE SUBSEQUENT HIS-
TORY OF THE CASES.

By CHARLES J. CULLINGWORTH, M.D.

(Abstract.)

IN this communication is given the subsequent history of the three patients whose cases were narrated in the author's paper on "Vaginal Hysterectomy," read April 2nd, 1890, and who were still living when the paper was read. Of these, one lived for two years and two months, one for a few days short of two years, and the third for a little over seventeen months. Two enjoyed perfect health until within a few weeks of their death. In each of these cases death resulted from intestinal obstruction, the cause of which in one case remains unknown; in the other it was pelvic adhesions, the only signs of recurrence being a single enlarged gland, and a small ulcer in the vaginal roof. In the third case the history showed restoration to fairly good health for six or eight months, then gradual failure for twelve months, and, finally, six months of absolute confinement to bed, death occurring from kidney disease, due apparently to implication of the bladder and uterus in the recurrent growth. The patients with columnar-celled carcinoma lived longer than the one in whom the disease was of the squamous-celled variety.

Of the four cases narrated in the above-named paper, one terminated fatally, as a result of the operation, while three recovered. As the three patients who survived the operation are now all dead, it appears to me that it is my duty to communicate to the Society such particulars as I have been able to ascertain regarding their subsequent history.

Case 1, that of Mary K—, aged 46, the subject of columnar-celled carcinoma of the cervix, was reported in the paper as having remained well for eight months after the operation, and having then began to suffer from a recurrence in the tissues around the vaginal wound.

The patient died May 15th, 1891, having survived the operation for two years and two months. She enjoyed fairly good health for the first twelve months, the recurrent growth up to that time occasioning little or no inconvenience. On April 15th, 1890, she became an out-patient at the Homœopathic Hospital, under Dr. Burford. She attended there for some time, complaining of increasing local distress, chiefly in the form of burning pain, and ultimately, in December, 1890, she was taken into the hospital and remained as an indoor patient for a month. Dr. Burford tells me that "there was," during this time, "no bleeding of any account, or rectal or vesical fistulæ, although the whole upper vaginal tract was involved in the deposit. The chief troubles were subjective, and pain on sitting was the most marked of them."

On returning home she kept her bed almost continuously until 1st May, 1891, when she was admitted into the Cancer Hospital at Brompton, where she died fifteen days subsequently. Her chief symptom when at Brompton was severe pain before and after micturition. The note of the post-mortem examination (kindly furnished me by Mr. Jessett) is as follows:—"Kidneys much enlarged; pelvis of both greatly dilated and thickened, and distended with fluid; kidney substance very pale; both ureters dilated. Return of disease in upper part of vagina, implicating bladder."

Case 1 was the fatal one.

Case 2, that of Amy S—, aged 43, was one of squamous-celled carcinoma of the cervix. The uterus was extirpated February 6th, 1880, and the patient survived the operation for seventeen months and ten days.

After leaving the hospital she completely lost her cachetic appearance, and for many months remained remarkably well. She regained her healthy colour and became stout and strong. The hemorrhage never returned. One of the ligatures which had not come away when she left the hospital did so on May 22nd, 1890, three months and a half after the operation. The other had not come away on June 3d, 1890, when she was examined for the first time after her discharge. There was then no sign of recurrence and very little thickening about the cicatrix.

The patient did not again present herself at the hospital until June 5th, 1891. She then complained of epigastric pain and vomiting, which had come on suddenly a month previously, and had continued ever since. The opportunity was taken for making a vaginal examination, although there had been no hæmorrhage or discharge of any kind.

There was no evidence of local recurrence. The impression given to the finger was as though some smooth-walled viscus had fallen upon the wound, and, having become adherent, had closed it. The symptoms continuing, the patient was admitted as an indoor patient on June 26th. The loss of flesh that had taken place in the meantime was quite remarkable. She had become so altered as to be scarcely recognizable. It was now ascertained that there had been increasing difficulty with the bowels during the past ten weeks, up to which time they had acted perfectly. Since June 23d there had been no action. Enemata failed to give relief, and on the 1st of July the vomiting became distinctly faecal. An artificial anus was subsequently made in the small intestine, the sigmoid flexure being found empty and flaccid. But the patient did not survive the operation many days, death taking place on July 16th, 1891.

Unfortunately no post-mortem examination was permitted. It therefore remains uncertain whether the intestinal obstruction was the result of new growth or of pelvic adhesions connected with the first operation.

The last case (No. 4) was that of Emily S—, in whom the operation was performed February 27th, 1890, for columnar-celled carcinoma of the cervix. The patient survived the operation twenty-three months and a half, having had excellent health up to within a month of her death. On rising from bed on the morning of January 10th, 1892, she was seized with vomiting which she ascribed to having eaten a tainted mutton chop the previous evening. The vomiting persisted, however, coming on every time she took food, of whatever kind, and she had constant pain in the umbilical and epigastric regions. On the first day of the attack the bowels did not act; on the second and third days they acted once; on the fourth and fifth days there was no action; on the sixth day she took castor oil, and the bowels acted once; on the seventh day she again took some castor oil, but it was immediately vomited, and there was no action of the bowels on that day or subsequently. In the meantime the patient was becoming rapidly emaciated and on January 26th, when she was admitted as an in-patient, the alteration in her appearance was so great that she was scarcely recognizable. The abdomen was distended and tympanitic; the rectum contained some scybala. Enemata had the effect of emptying the rectum, but nothing more. A consultation was held with a view to surgical relief, and on January 28th Mr. Wm. Anderson made an incision, in the hope of being able to perform colotomy. The large

intestine, however, was found collapsed, and he therefore secured a coil of the small intestine to the parietal peritoneum, opening the gut four days later. The pain and distension were thereby relieved, but the patient gradually sank and died on the 11th of February, 1892.

Dr. Hawkins made a post-mortem examination, and has kindly furnished the following notes:

The body was much emaciated.

There was an artificial anus in the left groin, in the usual position of an inguinal colotomy wound.

The uterus and the appendages had been at some previous date removed, and the vagina was a cul-de-sac ending in a knot of dense cicatricial tissue, which formed part of the pelvic floor.

Adherent to this knot and to the adjacent posterior surface of the bladder were two inches of small intestine, this point being four feet above the cæcum; the adhesion was very firm, the bowel (which was here bent twice acutely) had to be dissected away, and water could only just be forced through the point of obstruction at high pressure.

The artificial anus was seven and a half feet above the point of obstruction in the small intestine.

In the cicatricial tissue of the pelvic floor lay a solitary gland infiltrated with new growth; in the upper end of the vagina was an ulcerated area having the size of a threepenny piece (of which the floor shows cancerous infiltration).

There was early hydronephrosis of the right kidney, owing to involvement of the right ureter in the pelvic scar-tissue.

There was no peritonitis and no peritonitic adhesion other than that described above as the cause of death. Other viscera were healthy.

The results may be summarised as follows:—Of the three patients, one survived the operation for two years and two months, one for a little short of two years, and the third for a little over seventeen months. The two patients who lived the longest were operated upon for columnar-celled carcinoma; in the other the disease was of the squamous-celled variety. In two of the cases the patients were restored to complete health and a life of full activity until within a few weeks of their death,—that is, for a period in the one case of a year and three months, in the other of a year and ten months. In both these patients death resulted from intestinal obstruction. The cause of this in one case remains unknown. In the other it was the result of adhesions about the wound, the only signs of recurrence being a single enlarged gland and a small ulcer in the vaginal roof. In the third case the operation resulted in fairly

good health for six or eighth months. The history then showed gradual failure for twelve months, and, finally, six months of absolute confinement to bed, death occurring from kidney disease, apparently the result of the implication of the bladder and ureters in the recurrent growth.

Dr. PLAYFAIR said that, observing Dr. Cullingworth's paper was to be read that evening, he had thought that it would be of interest to bring to the Society two uteri which he had extirpated for cancer within the past month, each of which exhibited points worthy of notice, and from which instructive lessons might be learnt. In his opinion the whole subject of the surgical treatment of this terrible disease was *sub judice*, and neither total extirpation nor supra-vaginal amputation could be considered, so far as their present experience went, as anything but very unsatisfactory procedures, affording the patient the chance of prolonging her life in comfort for a greater or less length of time, but which, so far as existing evidence went to show, did not give a reasonable hope of complete cure. The important point to settle was, which of these procedures afforded the patient the best chance for the future? He had operated in a large number of cases by supra-vaginal amputation, but sooner or later the disease had recurred in all. In one case five years had elapsed without the recurrence, but that was the longest time. In another case, three years after the operation, he detected a small nodule on the uterine stump, and thinking it looked suspiciously like a commencing recurrence, he proposed to excise it and cauterise with Paquelin's cautery. The patient, however, objected, and he heard no more of her for a year, when he was told that she was everywhere vaunted as an example of the complete removal of a cancer by the "faith cure," to which she had resorted. Probably he was wrong in supposing that the suspicious-looking nodule meant recurrence and his operation was more successful than he supposed. If this patient were still alive, seven years must have elapsed since the original operation, but clearly the "faith cure" and not "supra-vaginal amputation" would get the credit. All his other cases had relapsed in a much shorter time. Nor was the immediate danger altogether a negligible quantity. He did not know of any reliable statistics on this point, but he observed that in a recent paper read at the Gynæcological Society advocating this procedure death had followed in two out of twenty-four cases, *i. e.* about 8 per cent. That represented an initial mortality but little less than that of total extirpation. Now it must be admitted, he thought, that if from improved technique, &c., the mortality of total extirpation could be shown to be not mate-

rially greater than that of supra-vaginal amputation, it must be considered the most surgically correct and hopeful procedure. No surgeon in his senses would remove part of a cancerous organ if he could remove the whole of it without much more danger than a part. Would any surgeon, for example, remove parts of a cancerous breast instead of the whole? And why should the same rule not apply to the uterus? The question, therefore, to be decided seemed to him to be whether the safety of partial excision was so much greater than total as to make it preferable. So far as recent statistics went, the tendency seemed to show that the more thorough and surgically correct operation, unsatisfactory though it was, would come more and more into favour. One of the specimens he had to show bore on an important question. It had been argued by Dr. John Williams and others that in epithelial cancer of the cervix the tendency of the disease was to spread laterally on to the vaginal walls and not up into the uterus, and that they might therefore safely rely on supra-vaginal amputation. This had always seemed to him a dangerous doctrine. Now in the specimen shown the disease was apparently limited to the cervical portion, so far as naked-eye appearances went. Yet in the sections shown under the microscope, taken from near the fundus and right away from the apparently diseased textures, there were marked evidences of malignant infiltration, supposed by Mr. Lenthal Cheatle, who had been good enough to examine the specimen with his usual care and thoroughness, to be probably plugged lymphatics. Similar specimens had been shown by Olshausen and others, so that the theory that the epithelial variety of cancer could be safely considered to be limited to the cervix seemed untenable. This case was a typical example of the so-called "cauliflower excrescence," there being a sprouting mass about the size of an orange growing into the vagina, which was removed by a preliminary operation before the uterus was extirpated. The patient made a good recovery. In the other case the question of supra-vaginal extirpation did not arise, as the disease was limited to the cavity, the cervix being apparently healthy. The patient came from abroad a month before she was operated on, suffering from incessant hæmorrhages, and was even then much prostrated. The fungating mass in the cavity could be easily made out, and the uterus being quite mobile it was obvious that extirpation was the only possible procedure, and gave her the only chance. She refused, however, to submit to the operation. In a month she returned and begged to be operated on. The disease, however, had made much progress. She was in the last

stage of debility from hemorrhages, and the case was otherwise most unfavourable, as she had a narrow, undilated vagina, being a nullipara. He would have been driven now to refuse to operate, but she and her friends were now most anxious that she should have the chance, and as the uterus was still quite mobile it was undertaken. With much difficulty the broad ligaments were tied and the uterus separated, but it was then found impossible to remove the uterus through the vagina, partly because of its size and partly because of the softened tissue tearing under the volsellum when traction was attempted. It was found necessary to remove it by a supplementary laparotomy, and the patient only survived forty-eight hours. He did not know whether this had ever before been the case, but he now much regretted that he had not adhered to his original opinion, and refused to operate on the patient's return.

Dr. LEWERS said that a conclusion as to whether vaginal hysterectomy or supra-vaginal amputation of the cervix was the better operation for cancer of the cervix could only be arrived at by comparing the results, both as to mortality and recurrence, obtained by these operations in a large number of cases. He did not think Dr. Cullingworth's cases were at all encouraging to those who were the advocates of vaginal hysterectomy, either on the ground that it was no more dangerous than supra-vaginal amputation, or that it gave a better prospect as regarded non-recurrence. On the contrary, these cases made it evident that there was an appreciable risk of intestinal obstruction as a remote consequence of the operation. Referring to his own experience, which had formed the basis of a paper read last month before the Royal Medical and Chirurgical Society, Dr. Lewers said he had had 19 cases of the supra-vaginal amputation without a death, and 6 of these were free from recurrence for two years and upwards after the operation. Four cases out of six were known to be well and free from recurrence at the present time, at intervals of nearly six years, nearly five years, three and a half years, and nearly three years respectively since the operation. The specimen from these cases and sections of them were shown before the Royal Medical and Chirurgical Society at the time the paper referred to was read. With respect to the body of the uterus being involved in some cases, as mentioned by Dr. Playfair, the point was that generally, when there was extension to the body of the uterus, there was also infiltration of the connective tissue round the cervix, so that such cases were unsuitable for either vaginal hysterectomy or supra-vaginal amputation. He was, however, of opin-

ion that exceptionally a case of cancer of the cervix was met with for which vaginal hysterectomy was required. He had shown a specimen in point recently.

Dr. HEYWOOD SMITH said that Dr. Cullingworth had set a good example in bringing before the Society the closing notes of these cases. He considered that the result in these cases told more in favor of the supra-vaginal amputation of the cervix, for in the two deaths out of the four that Dr. Cullingworth had related, the cause seemed due to obstruction resulting from adhesion of the bowel to the pelvic wound. This irregularity was avoided in the other operation. He therefore suggested whether it might not be advisable to draw down the wounded edges into the vagina, and so present a smooth rounded surface on the peritoneal aspect. It seemed to him (Dr. Smith), that, with the exception of cases of primary cancer of the fundus or body of the uterus, where, of course, total extirpation was the only proper method of procedure, wherever the uterus could be well drawn down, and if it could not such cases were not favorable for any operation, the supra-vaginal amputation of the cervix held out the best prospect of success at rather less risk to the patient.

Dr. GERVIS thought Dr. Playfair took a too gloomy view of the prognosis in cases of supra-vaginal amputation of the cervix, especially where the operation was undertaken for an epithelioma which had sprung from the vaginal aspect of the cervix, or which, commencing in the cervical canal, had spread laterally rather than upward. He had had one such operation nine years ago, in which the patient was still alive and well, and others similarly successful after a lapse of six and seven years.

Dr. WILLIAM DUNCAN pointed out that at the present moment there were no statistics showing the mortality in a large series of cases in which vaginal extirpation and supra-vaginal amputation of the uterus for cancer had been performed in this country, and that therefore we were not in a position to dogmatize on the subject. The best series of vaginal extirpations he knew was that of Professor Sinclair, of Manchester, whose mortality was certainly as small as that of supra-vaginal amputation when performed by the most skilful operators. He must confess to a change of opinion with regard to the two operations, to that he expressed in a paper on extirpation of the uterus read before the Obstetrical Society in 1885, and he thought that if the mortality of the operations could be brought to anywhere near the same level, that

the total extirpation was the most scientific and surgical procedure, even though it were the more difficult.

Dr. CULLINGWORTH, in reply, said that he had not expected his "Supplementary Note" to be elevated to the dignity of a paper, and made the basis of a discussion. He had had an opportunity, in his reply to the discussion on his "Hysterectomy" paper, of expounding his views as to the relative merits of supra-vaginal amputation of the cervix and total extirpation of the uterus in cases of cancer of the cervix, and he had seen no reason to modify the opinion he then expressed. Dr. Playfair's specimen was a very striking illustration of the risk run by those who practiced what may be called the minor operation, of leaving behind an unsuspected focus of cancer in the body of the uterus. No operator could have discovered during the operation that there was a nodule of disease high up in the body, inasmuch as it was separated from the diseased cervix by an interval of apparently sound tissue. So that if it had been his original intention to remove the cervix only, there would have been nothing to lead him to depart from that intention. The fact of even the occasional occurrence of concomitant disease in the body of the uterus furnished a strong argument in favor of the removal of the whole organ, even when the cervix alone appeared to be affected. Dr. Lewers had undoubtedly had singular success, and he was not surprised that with such gratifying results he remained a strong advocate of the partial operation. But the number of operators who agreed with him was steadily diminishing, and he had little doubt that total extirpation would come to be recognised as the more satisfactory method of dealing with the majority of those cases in which a radical operation of any kind was permissible. His own experience of the operation was, of course, much too limited to furnish an argument either on one side or the other. Few, however, as his cases were, he had felt that their value as clinical records would be increased by such a "Note" as had just been read, giving the after-history of the patients up to their death.

**PAPILLOMATOUS OVARIAN CYSTOMA, REMOVED
AFTER DOUBLE OVARIOTOMY FIFTEEN YEARS
PREVIOUSLY.**

By J. D. MALCOLM, M. B., C. M.

MR. KNOWSLEY THORNTON had performed double ovariectomy on the patient eleven years previously, removing two multilocular cystomata,

which were adherent to each other, to the pelvic and to adjacent peritoneum, and had papillomatous growth both on their inner and outer surfaces. The operation performed by Mr. Malcolm was the removal of a multilocular cystoma with papillomatous growth on its inner surface only. There was nothing to distinguish this second operation from the removal of an ordinary non-adherent ovarian tumor extending deeply into the left broad ligament except the absence of the Fallopian tube. This was the most remarkable, not only because papilloma existed at both operations, but also because Mr. Thornton's operation had been one of the last performed by him without antiseptic precautions; drainage of the pelvis through the abdominal incision had been employed, the discharge had been offensive for many days, and the wound did not finally heal till some ligatures escaped several weeks later. Nevertheless there was no sign of adhesion or of papilloma anywhere. The right broad ligament presented a rounded upper edge without ovary, tube, or any evidence of a pedicle.

Mr. ALBAN DORAN observed that the case was a very clear instance of non-malignant papilloma. He had seen a few similar examples at the Samaritan Hospital. Yet he had noted at the same place instances where papillary growths were scattered all over the peritoneum, and closely resembled the growths in the non-malignant cases; nevertheless, recurrence and death within two years occurred. Pathology could not explain this phenomenon. Probably the non-malignant papillomata were simply exuberant warty growths, whilst the malignant were sarcomatous outgrowths assuming a papillary form. Mr. Doran did not think that this theory had been proved by the microscope.

Mr. MALCOLM, in reply, said that his information respecting the first operation was received from Mr. Thornton, whose notes he had seen. In agreement with Mr. Thornton he presumed that the operation having been a very difficult one, some portion of the ovary had been left, and it was most interesting and important to know that a small piece of an ovary remaining in this way could give rise to an ovarian tumor. He remarked that the existence of a third ovary had been considered possible.

CASE OF ABORTION.

By W. S. A. GRIFFITH, M. D.

DR. GRIFFITH showed a specimen from an abortion in the third month of pregnancy, in which the decidual cavity was closed and distended with blood and formed the larger part of the mass, from a

healthy woman aged 30, 2-para.; this was her first miscarriage. Pregnancy commenced at the end of May, 1891, and ended on July 30th, 1891. From the position of the parts and their appearance it would appear as if the placental site was below the decidual cavity, and that had pregnancy continued the placenta would have been prævia.

SPONTANEOUS EXTRUSION OF A LARGE UTERINE FIBROID.

BY W. S. A. GRIFFITH, M. D.

THIS specimen was sent to him by Dr. Gilbertson, of Hitchin. It was a large uterine fibroid, weighing 1 lb. 100z., extruded spontaneously by the uterus, from a woman aged 43, who had suffered for two years from menorrhagia. Her last menstrual period was in November, 1892, when she suffered from retention of urine, needing the use of a catheter. On January 25th, 1893, she was seized with severe pains, like labor pains. Dr. Gilbertson found the tumor lying between the thighs, attached by a thin pedicle to the uterus; this was easily torn through. There was no further bleeding, and the patient made a good recovery.

LARGE ŒDEMATOUS FIBROID OF UTERUS, REMOVED BY ABDOMINAL HYSTERECTOMY.

BY C. J. CULLINGWORTH, M. D.

DR. CULLINGWORTH exhibited an extremely soft uterine fibroid, removed by abdominal section ten days previously from an unmarried lady, aged 41, who had suffered severely from dysmenorrhœa and menorrhagia. The mass removed, consisting of the body of the uterus as well as the tumor, weighed 9¼ lbs. The tumor was interstitial, with a sub-peritoneal projection at its summit and, at its lower extremity, a sub-mucous projection of conical shape, occupying the uterine cavity, and measuring 7½ inches in length on one side and 3½ inches on the opposite side. It contained no cysts, though its extremely œdematous condition had produced so much softening as to give the impression that it was partly cystic.

An interesting point in the case was that the patient had been under treatment in 1889 by Apostoli's electrical method for a period of eleven weeks, during which time she had nineteen applications.

The pedicle was treated extra-peritoneally. The patient had so far made a most satisfactory recovery.

Mr. ALBAN DORAN asked if Dr. Cullingworth attributed the degeneration of the fibroid to the electrical treatment. Mr. Thornton once exhibited a uterine fibroid-cyst before the Society (*Transactions*, vol. xxxi., 1889, p. 199) which had unsuccessfully been treated by electrolysis. The abdominal integuments were scarred, and the tumor, according to the patient's account, grew larger under the treatment. Other operators had expressed their belief that electrolysis encouraged cystic degeneration of fibroids.

Dr. CULLINGWORTH, in reply to Mr. Doran, said he was not aware of any evidence to show that the electrical treatment was capable of producing myxomatous degeneration, and he did not at all wish to imply that the condition in which the tumor in this case was found was attributable to the treatment. There could be no doubt that powerful electrical currents did occasionally result in localized necrosis of the tumor, but that had not happened in this instance, notwithstanding that, according to the patient's statement, a current of the strength of 200 milliamperes had sometimes been employed.

OSTEO-MALACIA CURED BY EXCISION OF THE OVARIES.

BY ADOLPH RASCH, M.D.

THE woman, aged 41, a native of Coblenz, who had lived in London for upwards of seven years. She had had three living children without difficulty. The disease commenced after her last confinement in November, 1890, the symptoms gradually increasing but rapidly getting worse after a new conception in October, 1891. She had kept her bed since Christmas, 1891, incapable of moving and in terrible pain. Dr. Rasch induced abortion on March 19th. Eight weeks after there was no abatement of the severe osteo-malaceous symptoms. Both ovaries were excised on April 30th. The pains were less after three days, and quite gone after a month, when the patient got out of bed. She manages to do her household work now, and has not menstruated since the operation. The excised ovaries were of perfectly normal appearance. The neighboring veins were congested at the operation.

The rami pubis formed a narrow beak, with difficulty admitting the exploring finger. The acetabula were pushed inwards, the sacrum and

promontory forwards, the coccyx curved upwards. Dr. Rasch drew attention to the peculiar shape of the abdomen, resembling a very long ventral hernia in the middle line, due, in his opinion, to the altered line of action of the recti muscles, necessarily produced by the different direction of the pubes. A number of similar cases had been successfully treated in Germany since Prof. Fehling suggested and carried out castration as a remedy for this disease.

Report of Committee on Dr. Rasch's Case of Mollities Ossium, shown December 7th, 1892, and described above.

We examined the patient at St. Bartholomew's Hospital on December 13th, 1892. Her height is 4 feet 5½ inches. She is able to stand without assistance, and to walk a little with help and without pain. She states that she now suffers no pain when lying and sitting.

The deformity of the bones is confined chiefly to those of the thorax and pelvis, which present the usual characters. The pelvis is beaked, the outlet is so contracted that it only admits a finger with pain and difficulty, the rami of the pubes and ischium lying close together and almost parallel.

The measurements of the pelvis are as follows :

Interspinous	9½ inches.
Intercristal	10½ “
Conjugata ext.	8 “

The true conjugate is probably of average length, but the available conjugate not more than half the proper length.

ADOLPH RASCH.
P. HORROCKS.
ROBERT BOXALL.
W. S. A. GRIFFITH.

Report of Committee on Dr. Wheaton's Specimen of Dermoid Tumour with Bony Girdle, shown January 4th, 1893 (p. 4).

The specimen consists of an irregular bony mass, 1¾ inches in length, 1¼ inches in breadth, and 1⅜ inches in thickness. This mass of bone is partly covered by skin of variable thickness (in one part ⅔ of an inch thick), from which is growing some light brown hair about 1 inch in length. Underlying the skin is a thick layer of subcutaneous fat.

Projecting from the surface of the mass of bone are two teeth, apparently incisors; and on one side is a small cyst nearly $\frac{1}{2}$ an inch in diameter containing sebaceous material with hair growing from its walls. Attached by a slightly movable joint to one side of the principal mass is a piece of bone $\frac{3}{4}$ of an inch in length and $\frac{1}{4}$ of an inch in thickness, which forms with four other pieces of bone an oval ring, $1\frac{3}{4}$ inches in length and $1\frac{1}{2}$ inches in its transverse diameter. The ring is completed by two longer lateral pieces of bone, one of which bears a tooth, which appears to be an ill-developed canine; and two smaller flat distal pieces of bone, one of which has a small irregular plate projecting downwards from it. The pieces of bone forming this ring are loosely connected together by fibrous tissue, and show no synovial cavities. This peculiar ring-shaped arrangement of bones appears to be accidental, and to possess no spinal morphological interest.

CHAS. J. CULLINGWORTH.
HERBERT R. SPENCER.
S. W. WHEATON.

ABSTRACT OF THE TRANSACTIONS OF THE GYNÆ-
COLOGICAL SOCIETY OF CHICAGO.

February 17, 1893.

Dr. F. T. DOERING, in the chair.

FOUR RECENT VAGINAL OÖPHORECTOMIES.

By Prof. HENRY T. BYFORD.

The first case was one of marked constipation, pain in left side extending down into thigh, indigestion, frequent and severe headaches, and insomnia, diagnosis; prolapse of both ovaries with chronic ovaritis. Ovaries and tubes removed through incision into cul-de-sac. Patient discharged on twenty-fifth day.

The second case was for ovarian abscess and pyosalpinx on the left side. An incision was made through the middle of the posterior wall of the vagina; the abscess wall caught by two forceps and canula thrust between them evacuated the pus; the sac and tube were drawn through the opening and cut off. The incision was partly sutured, forceps applied to bleeding points and iodoform-gauze packed between the forceps. Discharged at the end of thirty-four days.

CASE III. Entered hospital for sterility—Hydrosalpinx, inflammation, and hyperplasia of right ovary. This ovary and corresponding tube removed by the vagina. Patient left the hospital on the thirty-first day.

Case IV. Two years ago underwent an operation for pelvic abscess. Now has small ovarian tumor on the right side, ovaritis of left ovary and double salpingitis. Adhesions were universal. The ovaries and tubes were removed through the vagina. Adhesions were so extensive and firm that in separating them several bleeding points had to be controlled with forceps, these were left from twenty-four to thirty-six hours. Drainage obtained by gauze. There was some trouble from retained secretions, but this was met by clearing out the offending fluid by the finger. This was a complicated case; double pyosalpinx of long standing, very extensive adhesions, augmented by previous operation, and the speaker pointed out that this case presented symptoms which would have been much more serious after a section.

DR. BYFORD stated that he preferred the vaginal method for removing diseased ovaries and tubes because it was a safe method and not followed by hernia or abdominal fistula. Retained secretions which have become septic, and which in a section would cause a peritonitis, are by this method easily removed by incision or breaking down the cicatrix with the finger. Every case operated on by Dr. Byford by the vaginal method recovered.

DR. FRANKLIN H. MARTIN:—In the removal of small ovarian cysts where there had not been peritoneal extension or pyosalpinx, without peritoneal extension caused by leakage producing peritonitis—in such cases the operation may be performed with some little difficulty, but it can be performed with safety. In cases of pyosalpinx with peritoneal extension and peritonitis, or extension and suppuration, what we would ordinarily call a pelvic abscess of considerable size, or of ovarian abscess with extension to the peritoneum, he does not believe the operation is a proper one to do. In the case given he cannot agree with the report that the condition would have been less favorable if the operation had been done by the abdomen. He believed if operation had been done by the abdomen the hemorrhage could have been easily controlled by the ordinary glass drainage-tube, which could have been removed in twenty-four to forty-eight hours, and the case recovered, as hundreds of cases do, without fistula. The incision into the bottom of the vagina undoubtedly increased the hemorrhage at this point, and it was not entirely the result from the removal of the adhesions; in other words, if he had gone in above, the mass could have been enucleated without any difficulty whatever. The advantages of the operation seem to be first a cosmetic one; these patients are beginning to learn that Dr. Byford removes pyosalpinx and ovarian abscess—or the “ovaries,” as they say—through the vagina without leaving a scar. That has been brought forward to me by patients in at least three cases as a great point in favor of that method. Another point is freedom from hernia; hernia will occur in very few cases after removal of the appendages through an abdominal incision, if the incision be properly made and properly united, as would be the case in Dr. Byford's hands. In fact, he doubted if he has ever had a hernia from an abdominal oöphorectomy. Those are two points in favor of the operation which occur to me.

A disadvantage is the difficulty in reaching the ovaries, even when they are movable and ready to be rolled out without any enucleation. Where peritoneal extension has occurred it is impossible to do the

work except entirely by guess work ; it is out of sight, and therefore dangerous. He had noticed in Dr. Byford's work that his cases are properly selected, they are most of them favorable for that kind of an operation, and where the cases are properly selected certainly no fault can be found with it, leaving the cases proper for an abdominal incision for that operation.

DR. F. BYRON ROBINSON is not convinced that the vaginal method is the best for these cases. The danger of hemorrhage seems to be greater, the danger of wounding the intestines is greater. The shock is much less. He does not consider the operation will become popular for the removal of a pyosalpinx.

March 17, 1893.

Dr. E. J. DOERING in the chair.

DR. CHRISTIAN FENGER read a paper on *Appendicitis*.

In regard to the pathology and etiology he said that inflammation of the mucosa was probably due to an extension of catarrhal inflammation of the cecum because fecal concretions are found in less than half the cases of perforation and because foreign bodies and ulcers are only exceptionally seen. The cause of the initial catarrh is unknown. The swelling of the mucosa leads to stenosis at the narrowest point—Gerlach's valve. The material retained may become septic and invade the wall of the appendix through intact epithelium or through ulceration.

The microscope shows evidences of septic lymphangitis in the wall of the appendix and in the subserosa diffuse islands of Lencocytes or miliary microscopical abscesses are seen. The lymphangitis and diffuse inflammation are more pronounced in the subperitoneal tissue than in the muscular coat, therefore the constant presence of adhesions.

The catarrhal inflammation may subside and permanent recovery follow several attacks, or there may be a diffuse phlegmonous inflammation terminating in gangrene of a part or the whole of the appendix. Perforation always occurs in the severe cases. In mild localized cases of intermittent appendicitis perforation frequently exists. A small opening and a slow process of perforation do not necessarily lead to a serious attack. As regards the location of the appendix the author quotes Lange : (1) Around the cecum in the iliac fossæ above the outer

half of Poupart's ligament and upon the anterior surface of the abdomen; (2) on the medial side of the cecum; (3) rarely in the small pelvis; (4) on the outer lateral side of the cecum, extending up into the lumbar or renal regions.

As regards the prognosis of appendicitis he states that it is a benignant disease with a good prognosis. As perityphlitis originates from the appendix in the majority of cases of this disease taking then the statistics of this disease we have a mortality of about five per cent. In regard to the attack that has terminated in recovery he states that Randous has investigated those cases and found that the appendix had become obliterated by an adhesive inflammation. He regarded it highly probable that perforation had taken place. Lange attempts to explain the discrepancy between our home literature and the rate of mortality stated (which is based on the hospital statistics of Rewvers, Vollert, Fürbringer) by the statement that the surgeon only sees the serious cases; that the most severe cases are not treated in the hospitals, but die at home; that severe cases are more common in this country on account of different mode of life, diet, etc.

Dr. Fenger makes the following division of the subject:

CLINICAL FORMS OF APPENDICITIS.

1. Diffuse peritonitis.
 - (a) Acute sepsis.
 - (b) Acute diffuse suppurative peritonitis.
 - (c) Subacute progressive peritonitis (Mikulicz).
2. Localized suppurative peritonitis—perityphlitic abscess.
3. Recurring chronic appendicitis and peri-appendicitis.
4. Adhesive appendicular peritonitis with localized non-suppurative peri-appendicitis—Keen's mild form.
5. Late consequences following appendicitis, chronic abscess, bands, adhesions, intestinal obstruction, pain.

Fenger operated on eleven cases of diffuse peritonitis, only one of which recovered.

The author stated that among these cases all forms were represented from diffuse peritoneal sepsis down to the mild chronic forms.

Against the dry forms of peritonitis where there is no exudate and where there is only slightly infection of the peritoneum, which is glistening and apparently normal, surgery is of no avail.

In regard to operation he quotes Lange that "We cannot make

the diagnosis early enough to save life by laparotomy, that is, by removal of the appendix. It would seem to require a toxic antidote not yet discovered rather than a laparotomy to effect a cure.

In regard to the time of operating, the author declares it is impossible to designate any particular period. The pulse and temperature furnish no adequate guide—as acute sepsis and diffuse peritonitis not infrequently occur secondarily in cases which present mild symptoms in their commencement and which result from perforation of the appendix or rupture of an abscess into the general peritoneal cavity the author is prepared to perform a laparotomy even in mild cases.

PERITYPHLITIC ABSCESS.

All these cases are characterized by acid in recovery, and as the peritoneal cavity is not opened there is but little risk attending their drainage. We are unable to distinguish, even with the exudate before our eyes, between a benignant limiting fibrinous exudate and the dry fibrinous exudate of diffuse dry peritonitis. The symptoms and the time from the onset are not an adequate guide. For these reasons there has arisen such a difference of opinion concerning the time and the method of operating. In regard to the removal of the appendix, in case of acute suppurative peritonitis it should always be removed as it is the cause of infection. In case of localized abscess the appendix may be left alone as there is slight danger of relapse. In case of doubt as to the character of the case it is better to remove the appendix. In case it is determined prior to the operation to remove the appendix make a lateral abdominal incision into the peritoneal cavity; if it is determined merely to drain the abscess avoid the free cavity and make no search for the appendix.

RELAPSING VS. INTERMITTENT APPENDICITIS.

Three cases are reported, all operated on between the attacks and one case died.

Of the late consequences following appendicitis the author gives two illustrative cases.

ENTEROSTOMY AND DRAINAGE IN THE TREATMENT OF DIFFUSE SEPTIC PERITONITIS.

DR. FERDINAND HENROTIN read a paper on this subject. He agrees with the paper of Dr. Fenger on the following points: Operate, first, upon all cases accompanied by general or diffuse peritonitis;

secondly, operate upon the cases wherever a tumor exists in the region of the appendix, which steadily though slowly increases after the first four or five days of its discovery; lastly, operate upon the cases that are known as cases of recurrent appendicitis, providing such attacks give signs of gravity.

Henrotin spoke of a class of cases where the symptoms pointed to the existence of diffuse peritonitis yet they were protected by a wall of lymph, cases where the development of the general inflammation is coincident, or almost so, with the usually present perforation of the appendix—have a moderately fair chance of recovery if operated upon in fairly reasonable season; while the cases of what I call secondary rupture—that is, where the exudation mass formed around an abscess sac ruptures after having been plainly perceptible for a number of days—almost invariably die, no matter how very soon after this secondary rupture the operation is performed. He has seen five cases of this last variety in his own practice, and four additional cases in the practice of his associates. All these nine cases proved fatal within a short time after the operation. It was supposed that the pus being confined within a small cavity communicating or having communicated with the bowel required excessive toxic virulence.

He called attention particularly to the treatment of the cases which he called for the sake of convenience, primary diffuse peritonitis. These cases from the beginning present symptoms of the most dangerous character; extreme rapidity of the pulse, early dyspnea, cold extremities, repeated vomiting, anxious countenance and rapidly developing meteorism—thirty six or forty eight hours—and the patient shows signs of impending dissolution; or, the first onset being apparently passed over, the symptoms continue not quite so acute, and the patient dies, in five to eight days from sepsis and its resulting paralyzed, tympanitic, distended intestines.

CASE I.—L. A., a young girl aged seven years, was suddenly and without premonition taken with vomiting and various sign of extreme illness. Her physician, a painstaking practitioner of experience, was utterly unable at first to determine the cause. Only moderate fever was present. When he called me at 5 P. M. the second day, after the child had been ill thirty-six hours, he diagnosed peritonitis from the extreme condition, the rapid pulse, the short breathing, and the moderate tympanites then present. The danger being extreme, I operated one hour later, the doctor narrated the case of a little girl seven years of age. Abdomen opened on the second day for symptoms of peritonitis. The

abdomen was filled with fluid already containing much pus, while all the visible intestinal coils were more or less covered with plastic exudate. The appendix was occluded at its middle portion by a fecal concretion twice as large as an apple seed and near its extremity there was a small perforation.

The patient was very weak so no sutures were used in the incision which was small but iodoform-gauze was stuffed into the wound down to the site of the stump of the cervix-appendix which had been removed. Fecal matter was found in the dressings on the third day and the patient made a good recovery. Another case was that of a boy fifteen years of age, who was seen after the fifth day of the development of an acute peritonitis. A pint of pus escaped through the incision in the abdominal wall. The cecum was enormously distended and the appendix buried in a mass of exudate. An incision was made in the cecum about an inch in length and the edges united to the abdominal wall thus creating an artificial anus. Both cecum and abdominal cavity were carefully irrigated. Gauze drainage was used. Henrotin believes that the opening of the intestines in this case saved the patient's life. He recommends the simular incision for draining the cavity and the side incision for draining the cecum. In closing his paper he remarks:

"All I desire to emphasize is, that in *severe* general diffuse septic peritonitis with tympanites, from whatever cause, the chances of recovery will be enhanced if two openings are made, one to drain the peritoneal cavity, and the other, an artificial anus, to relieve the distention."

DR. DANIEL H. WILLIAMS reported several cases of inflammation starting in the cecum and vermiform appendix.

It was not his object to be exhaustive, or, indeed, to take up the literature of the subject at any length, but simply to mention some of the practical points in the history, diagnosis, and medical and surgical treatment of inflammations starting in the cecum and appendix.

The first case is that of Mr. J. G., and is one of the type of which I have had three. It began as an acute catarrhal appendicitis caused by a foreign body, and ended in suppuration. The following is the case:

Seen twelve hours before operation. The attending physician had in the meantime diagnosed it as perforative appendicitis and urged an immediate operation. The patient while at work some two weeks before, was attacked with sharp pain in the right iliac region. He

continued to work for ten days after the first attack. When seen at his home he was in bed, lying on his back, right leg drawn up; temperature $102\frac{1}{2}^{\circ}$ F., pulse 130, respiration 26; no nausea or vomiting; abdomen distinctly tympanitic; marked rigidity of right abdominal muscles; finger tips, nose, and ears cold; general tenderness in right inguinal region, from Poupart's ligament below to a line drawn from the anterior superior spine to the umbilicus. Greatest tenderness was over centre of the tumor, which was one and a half inches above the anterior superior spine, on a line with the umbilicus. The tumor was irregular, resistant, and not well defined; skin over tumor edematous.

The case was admitted into the Provident Hospital in the evening, and the diagnosis of perforative appendicitis was confirmed by the associate surgeon. Small doses of whiskey every three hours, enema of glycerin and Rubinat water the evening before, and a strictly liquid diet were ordered, and the usual preparation made for operations of this kind.

The patient was brought to the table with a temperature of 103° F., pulse 140, respiration 30. An incision three inches long was made immediately over the tumor; peritoneum was found thickened; getting through the peritoneum, about two ounces of fetid pus were discharged. Necessary care was taken at this point not to break up the delicate limiting adhesions, so often found and so necessary to protect the peritoneum from general infection. The patient was turned on his right side to facilitate the flow of pus. Index finger was introduced, and a fecal concretion about the size of a small filbert was removed. A soft-rubber catheter attached to a glass tip from a slightly elevated fountain syringe was introduced and the cavity irrigated. The mesentery of the appendix was tied off with fine silk; the appendix, about as thick as an index finger, was ligated with silk and removed. The stump was touched with strong carbolic acid on a probe point, cavity packed with iodoform gauze and patient removed to bed. At eight P. M. same day temperature $100\frac{1}{2}^{\circ}$ F.; seven A. M. following morning, $99\frac{1}{2}^{\circ}$ F. The temperature remained in the neighborhood of 100° F. for the three following days, when the patient had an ill-defined chill. The packing was removed, cavity irrigated with Thiersch's solution. Running upward from the bottom of the cavity there was a slight bulging that did not appear to communicate with the original abscess cavity. About two inches above the crest of the ilium an edematous, tender spot was located. The patient was returned to bed; temperature 100° F. Next morning patient anesthe-

tized. A vertical incision three inches long, the centre of which was over a painful spot (in the loin), was made; cutting through the lumbar fascia, a small quantity of pus escaped. The opening was enlarged and made to communicate with the original abscess cavity; a large drainage tube was placed from the inguinal opening through the opening in the loin. After irrigating with Thiersch's solution the cavity was packed with iodoform gauze; temperature at eight P. M. 99° F., following morning 98° F. From this time on he had no untoward symptoms, and recovery was perfect in about five weeks.

The second case was as follows: Harry L., eight years old. July 10th, 1892, he was attacked suddenly with a chill. The next day he was seen by the writer, and the following observations were noted: Temperature 101° F., pulse 120; pain in right inguinal region, most tender one and a half inches below anterior spine, on a line with the pubes; tip of nose, ears, and fingers cold; abdomen moderately tympanitic; slight rigidity of the right abdominal muscles; bowels habitually constipated; a small tumor, one and a half inches from the anterior superior spine toward the pubes, was made out. Operation July 13th. An incision three inches long was made, the centre of which was over the tumor. Small intestines presented. On cutting through the peritoneum and following the colon down to its junction with the ilium, the appendix was found to be about five inches long. It was large, red, and edematous. Incision was enlarged and appendix turned into the field of operation; the mesentery of the appendix was ligated with fine silk; the appendix was isolated and ligated close to the cecum; stump treated with strong carbolic acid on a probe point; the cavity was carefully sponged out, but not irrigated. This stump was very large and dangerous-looking, and from it I feared infection of the general peritoneal cavity. A piece of rubber tissue was placed against the intestines and iodoform packing was made to the surface. The wound was stitched up all but about an inch at the lower angle. In thirty-six hours this boy's temperature was normal. He did well from this on, and returned home from the hospital in twenty-two days.

The third case was as follows: Mrs. A., age forty-six years. June 14th she was attacked with a chill, followed by intense pain in the right iliac region. She was seen the same evening; found lying on her back, leg flexed on thigh and the thigh on the abdomen. Her bowels had been habitually constipated; temperature 104° F., pulse 120, and respiration 28; tongue coated in the middle and red on tip and sides; abdominal muscles rigid, moderate tympanites. A small, irregular tumor

was found about an inch from the anterior superior spine of the ilium toward the median line; point of greatest tenderness, two inches above Poupart's ligament.

Treatment, glycerin enema, strict liquid diet, continued moist heat. Second day: Tumor increased in size; chill at 3 A. M.; one-sixth of a grain of morphine hypodermically. Third day: Tumor increased in size; increased tympanites; more pain; slightly œdematous two inches above Poupart's ligament. An immediate operation was advised. The operation being refused, other counsel was called. June 30th I learned that Mrs. A. had been taken suddenly worse on the 25th and died on the 27th. From what was learned from Dr. Burdick it seems plain and reasonable to say that, starting from acute appendicitis, the case went on to suppuration, rupture, and death. A post-mortem examination was refused. There is little to be said of this case, as it was one of the results often seen where the appendix is primarily involved. It is not always that suppuration in connection with the appendix results fatally. Limiting adhesions wall off and protect the peritoneum, the pus finding its way to the surface by the least resistant route, where it ruptures, or an extraperitoneal operation can be done with but little danger. The only point in this connection is to exercise patience and care so that the limiting adhesions are not disturbed and the peritoneal cavity infected.

Of the next type or class of cases I have had five, all but one recovering without an operation. These are the cases which are causing a most bitter contention between the physician and surgeon—the physician on the one hand asking for time, the surgeon on the other ignoring time and pleading for immediate interference. There has been much warm contention between such conservative men as White of Philadelphia, Treves of London, Rand, Lange, and Gerster of New York, and some of the noted surgeons of our city who are present to-night—these men arguing against the practice of indiscriminate laparotomy for appendicitis. On the other hand, McBurney and Weir of New York, Cruikshank and Fowler of Brooklyn, and a host of foreign surgeons, accept no middle ground, claiming that the indications—such as sudden onset, high temperature immediately following, vomiting, localized pain and tenderness in the right iliac region, with or without the presence of tumor—are positive signs of the inflammatory involvement of the appendix, and that we have no means of distinguishing the cases which will go on to suppuration from those which will result in resolution; and they argue, therefore, with some reason, that early

laparotomy should be resorted to, in order that, by ocular inspection of the parts, a correct diagnosis can be made and timely treatment afforded.

October 5th, 1892, Frank B. went home from his place of employment at 6 o'clock, ate his supper and retired. At 11 o'clock he awoke with sharp pains in the right iliac region. He was seen at 11.30 A.M., October 6th, and the following observations noted: Age, 14 years; previous health good; no history of former attacks; rather inclined to lie on his back with the right leg drawn up; complained of pain if any attempt was made to straighten it; face flushed; tongue covered with a brownish coat; temperature 103° F., pulse 120, respiration 26; lungs and heart normal, except increased rate; urine, quantity not estimated, a large deposit consisting mostly of urates, otherwise negative; bowels constipated; persistent nausea, no chills; tenderness referred to right iliac region; on closer examination with the finger tips, the most painful spot was found two inches below the umbilicus, one and one-half inches to the right of, on a line with, the anterior superior spine; rigidity of the right abdominal muscles; tympanitic over lower right abdomen; no dullness on percussion; plain in the region supplied by the lumbar plexus, thigh, abdomen, perineum and testes.

Brought to face such an array of symptoms, the question one should consider first is, What are the contents of this region? The cecum and the appendix. What causes would give rise to such symptoms? An acute inflammation, known by its suddenness, tenderness and elevation of temperature. What known factors will cause the inflammation? Two of the most prominent are infection and a foreign body. Studying abdominal and pelvic anatomy for the past six months with Dr. F. Byron Robinson, it was time and again demonstrated, as Treves had previously shown, that the cecum is entirely covered by the peritoneum, and, though it may not have a mesentery as the appendix has, it swings free in the peritoneal cavity, and inflammation in the cecum is very likely to reach its peritoneal covering, and not the cellular tissues in the iliac fossa. The cecum may be inflamed in association with a general colitis, or frequently from inflammation due to retention and impaction of feces. Inflammation thus started may extend into the appendix, and, by closing the opening from this into the cecum, give rise to an appendicitis by retention of mucus—a recognized cause of recurring attacks.

From a pathological point of view the cecum offers a ready explana-

tion for mild and many recurring attacks, the cause usually being fecal impaction; but for the cause of those in which suppuration is most often met we must look elsewhere.

Prof. Sahli, in a recent observation, says: "These inflammatory conditions represent an infection of the cecum and appendix. Their severity depends on the actual cause of the disease, and the starting point does not explain their clinical picture. Non-perforating ones may run a severe course, and perforating ones a mild one. The division into typhlitis stercoralis and appendicitis is not tenable. The swelling which is felt in the so-called typhlitis stercoralis is not feces alone, but much more often an exudation and inflammatory infiltration. The question should be as to which cases ought to be operated upon, and not as to whether typhlitis should be treated by operation or not." In his extensive experience he does not agree with the eminent men of the surgical centres of Europe or with those in this country, that all cases should be operated upon, for it is by no means proven that the mortality is diminished by operating upon all cases without discrimination.

The first thing to decide in these cases, which bear such a close resemblance in their every aspect for the first two or three days, is to operate or not to operate. On this point the broad-minded physician and the conservative surgeon can meet with much profit, for it is a very wise man who would operate in the first twenty-four hours on every case of inflammation starting in the cecum and appendix.

Treatment.—It was learned on the first visit that his mother had given him a tablespoonful of castor oil without effect. An enema of one ounce of glycerin and four ounces of Rubinat water was given at eleven A. M.; before twelve he had a copious stool. At eight o'clock the same evening another enema of the same kind was followed by another copious stool. Nausea and vomiting continued for thirty six hours. This was relieved by small doses of magnesia sulphate and acetate of potash. For the pain, menthol dissolved in dilute alcohol was applied on a sheet of absorbent cotton. This gave immediate relief and satisfactory results. I have since used this on three cases of the same kind at the Protestant Orphan Asylum and two in private practice, with complete relief from the pain.

I cannot speak too highly of menthol for this localized pain. It was suggested by its well-known effect on local pain elsewhere. It might be suggested that the physician personally superintended the first application, or he may be disappointed in getting his patient properly

relieved. Solid food of all kinds was prohibited, and an absolute liquid diet was maintained until the patient was fully convalescing. In one case hot poultices were used with some relief and comfort to the patient. After a few days they became an annoyance by their weight; light menthol dressings were substituted with complete relief during the rest of this illness. This patient returned to his place of employment in twenty-four days.

Dr. W. W. JAGGARD reported

A CASE OF ABSCESS OF THE VERMIFORM APPENDIX CLOSELY ADHERENT
TO RECTUM AND RIGHT TUBE, ASSOCIATED WITH DOUBLE
PYOSALPINX; REMOVAL OF SAC AND APPEND-
AGES; RECOVERY.

Miss L. C., age 21, single, worker in a factory, was referred to me by her physician, Dr. J. A. De Vore, about the middle of December, 1892, with the following history: The patient had enjoyed fairly good health until four months previous to my seeing her. At that time, while on a visit to the Eastern coast, she suffered from a severe attack of pain in her right side, which confined her to the bed for four or five days. She did not consult a physician, as she considered her illness due to catching cold at her menstrual period and thought she would be all right in a few days. She acknowledges, however, to having had a high fever and of feeling very ill. She has never been free from pain in the pelvis since that time and has been unable to work. Five weeks ago she was seized with severe pain in the right pelvis and sent for Dr. De Vore. An examination revealed a severe pelvic inflammation, which he treated with the usual remedies. There was considerable fever, pelvic pain and tenderness, and excruciating pain whenever the bowels moved. The local symptoms subsided sufficiently to enable the patient to walk about, but examination showed the pelvis filled with a hard tender mass, for the relief of which condition she was sent to St. Mark's Hospital, and kindly referred to me.

An examination under chloroform, December 21st, revealed hard, nodular, and somewhat movable masses on either side of the uterus. The latter was crowded against the pubes, and rather freely movable. The masses were closely adherent to the rectum. No fluctuation could be felt.

A celiotomy was performed two days later. The omentum was found closely adherent to the fundus of the uterus. This was carefully

separated, and upon the patient being placed in the Trendelenburg posture the large intestine was seen running transversely across the pelvis and attached to the uterus and broad ligaments by firm adhesions, completely shutting in the deeper portions of the pelvis. The bowel adhesions were carefully separated and the rectum exposed. The appendages were rolled up under the broad ligaments and densely adherent. In enucleating these masses an abscess sac containing about an ounce of pus was opened. This sac, which at the time was supposed to be an abscess of the ovary, was closely adherent to the rectum, from which it was peeled with extreme difficulty. The appendages were enucleated and removed and the stumps cauterized. The abdominal cavity was thoroughly irrigated with large quantities of sterilized water, and the abdomen closed after the insertion of a drainage tube.

An examination of the specimens proved most interesting. The left tube was greatly thickened and its lumen dilated and filled with pus. The right ovary was enlarged and intimately adherent to the tube. The abscess sac, which at the operation had been considered ovarian, was seen to be attached to the outer extremity of the tube. Its diameter was about one and a half inches. A hole was discovered in the wall of the sac, through which a fine probe could be passed. This orifice, the walls of which were smooth, did not present the appearance of having been punctured. A fine probe could also be passed through the entire length of the tube. A good photograph of the specimen was obtained. The abscess sac was judged to be the dilated vermiform appendix, and this supposition is strengthened by the position of the bowel, observed at the time of the operation, and the history of the case. It is to be regretted that the nature of the abscess sac did not suggest itself at the operation, as it would have been interesting to note the condition of the gut.

The patient, with the exception of a slight purulent discharge which occurred in the course of the drainage tube, made an uninterrupted recovery.

Dr. WELLER VAN HOOK.—In his study of appendicitis Dr. Fenger has taken the pathological point of view, which is the one we must take if we wish to attain a complete understanding of appendicitis.

It is the custom of many operators to break up adhesions in all cases of appendicitis and remove the appendix. After adhesions have been formed and the general peritoneal cavity has been fenced off from the source of infection, it seems to me that the Sonnen-

burg method of operation is the most reasonable and offers the patient the best opportunity for recovery—packing with iodoform gauze or stitching the peritoneum on the tumor surface to the parietal peritoneum. One such case came under my observation, where there was a layer of omentum between the tumor wall and the abdominal wall; and after stitching that layer of peritoneum to the parietal peritoneum the pus cavity was easily opened on the following day, and the patient made a good recovery.

It seems to me, in those cases where we are greatly in doubt as to the propriety of operating or resorting to medical treatment, we shall have to look to the future to give us an ideal knowledge of the pathology of the disease. Nothing has been said this evening in regard to the bacteriology of appendicitis and the peritoneal inflammations consequent upon it. A large variety of bacteria are doubtless to be found in different cases of appendicitis. The *Bacterium coli commune* has been found, and the characteristic inflammation that follows its introduction into the peritoneal cavity has been noted; and doubtless the ordinary pus microbes are frequently responsible for inflammation in the appendix. The number of bacteria that normally inhabit the appendix is immense. If we could, by examination of the urine for the excreted toxins or ptomaines produced by the pathogenic micro-organisms, determine what particular pathogenic bacteria or class of bacteria were present in and about the appendix, we might find indications which would determine for or against laparotomy in these doubtful cases. This, of course, is a point we shall have to leave to the future to settle; but it is certain that a bacteriological study of appendicitis is much needed.

The suggestion to operate upon recurrent attacks of appendicitis, not during the interval, but at the time of the exacerbation, has been made also by Dr. Bayard Holmes, for the reason that the abscess cavity, being distended by pus and elevated toward the abdominal parietes, to which it would probably be found adherent, would be easily drained. So far as I know, there is no reason why, when the abscess surrounding the appendix has been thoroughly drained, it should not become cicatrized and the patient recover.

Dr. HENRY BANGA.—As to the indication for operation, I have come to the conclusion that I would not operate unless I could feel a tumor at the classical place. I have sometimes thought that in general peritonitis, especially that kind following laparotomies that what really kills the patient is not the inflammation or the infection, but mostly

the difficulty in the action of the heart and respiration caused directly by the distention of the bowel. And if we add to this difficulty of the circulation and respiration the anxiety of the patient, the want of food, rest, and sleep, there are enough causes to explain why those patients die without infection.

I had made up my mind never to operate for appendicitis complicated with general peritonitis; but since I heard from Dr. Henrotin the good results he has had in opening the colon, I intend, in the future, to try the same procedure, not only in a case of appendicitis complicated with general peritonitis, but also in a desperate case of tympanites or peritonitis following laparotomy.

Dr. Van Hook speaks of stitching the abscess wall to the edge of the abdominal wound. I never saw an abscess wall that could be stitched in this way. My first case was that of a boy about six years old. On the seventh day there was a circumscribed tumefaction, no general peritonitis. The father hesitated about consenting to the operation. Feeling satisfied that the tumor was adherent to the abdominal wall, I thought an explorative puncture could do no harm, and we agreed that I should make a puncture, and if I found pus I should operate at once. I got pus, and the father said, "Go ahead." After I had gone through the abdominal wall I was first puzzled by the fact that the tumor seemed very much smaller—so much so that I wanted to assure myself once more of the presence of pus. I inserted the needle in two different places with negative results. What puzzled me next was the entirely healthy appearance of the peritoneum, which showed that the abscess had not become adherent, and I felt very bad about my reckless punctures. Yet the fact remained that by my first aspiration a drachm of pus had been withdrawn. I had to open the abscess. It seemed to me impossible to do it extraperitoneally, as the peritoneum right before me showed absolutely no signs of nearby inflammation, and as I was at a loss to know in what direction I would have to peel in order to reach the abscess; besides, I ran the risk of buttonholing it somewhere at the bottom of the wound. I then opened the peritoneum, with the intention of going straight on toward the appendix. A loop of small intestine presented in the peritoneal wound, showing the signs of acute inflammation of its serous covering. I tried to push the bowel over to the median line in order to keep as close as possible to the iliac fossa. The bowel, however, was adherent to the iliac fossa. Pressing the nail of my right index finger close to the iliac fossa, I began to peel

the bowel off, when all at once I felt with the tip of my finger into an abscess cavity containing about two tablespoonfuls of matter mixed with blood. I washed the cavity out, dried it with iodoform gauze, and inserted a drainage tube. The boy got well in a short time.

Since then I have had three such cases, where, after cutting through healthy-looking peritoneum, I came across a loop of intestine fixed to the iliac fossa, which I detached with the finger nail, keeping laterally toward the spina ilei as much as possible, when all at once pus would well out. In no case did I find a "sac" to be sewed to the wound. After cleansing the cavity and inserting a drainage tube I considered the operation successfully performed. All patients got well. Should the diseased appendix present itself, I would, of course, remove it; but I would never search for it after freely opening the abscess. The logic of the operation is simply to lead the accumulated matter to the surface, thus preventing its breaking through into the general peritoneal cavity, thereby starting fatal general peritonitis.

DR. HENRY T. BYFORD presented specimens of

TWO FETUSES REMOVED FROM THE PERITONEAL CAVITY AT ONE OPERATION.

They were apparently about four months old when they perished. The condition was complicated by a right hematosalpinx and a left hydrosalpinx.

Mrs. P. G., age forty-two years, eight children, youngest twelve years.

Seven years ago went two weeks over her time; then, October 23d, 1885, had a slight flow of blood and was taken with most severe cramping pains in lower abdomen, recurring again and again. Was in bed until December 10th, then got up and went to the office of Dr. W. H. Byford, who sent her back to bed for two weeks longer. Called on Dr. King, who prescribed ergot and caused the expulsion of something from the uterus.

Five years ago had a similar attack, commencing with cramps and fainting. The late Dr. J. S. Knox diagnosed a pelvic hematocele. Has been treating for diseased appendages almost ever since. Three months ago she had an attack of pelvic peritonitis with bulging in the cul-de-sac of Douglas. I apparently cured the attack by drawing off about five ounces of serum from the cul-de-sac.

Abdominal section February 21st, 1893, at the Woman's Hospital, assisted by Drs. J. T. Binkley and Marie White. Found the uterus and appendages matted together in a conglomerate mass the size of two large fists, with intestines adherent over them. Came first upon a hematosalpinx on right side, which burst and let out about four ounces of a bloody fluid. I then came down upon a membranous sac adherent in the pelvis, containing a fetus with bones well preserved. After tying off this side I found almost exactly the same thing on the left side, except that the tube contained a watery fluid. The adhesions were so firm that a portion of the cyst of the right ovary had to be left on an adherent loop of intestine, and the fetal sac of the right side had to be ligatured and a portion left on the rectum, to which it was adherent. No definite placenta was found. The operation was quite a bloody one throughout. Drainage for thirty-six hours. Unusually smooth recovery, temperature remaining below 100° F. throughout, excepting a temporary rise during the second week from a superficial stitch-hole abscess in the unusually fat abdominal walls.

This is another of the many cases that are being discovered in which extra-uterine pregnancy has not killed the patient. It is the second patient I have had with two tubal pregnancies, none of which produced any apparent dangerous symptoms. The condition has by no means the mortality attached to it that many eminent surgeons would have us believe. I know of no other case in which both tubes, each with a fetus, have been removed at the same operation. The history, together with the mummified appearance of the fetuses, would make it quite probable that one of the conceptions occurred seven years ago and the other five years ago; that each had caused a pelvic hematocele, had become encysted, and remained to trouble the patient ever since, but not to kill her.

He also exhibited an

INFECTED OVARIAN TUMOR WITH EXTENSIVE ADHESIONS REMOVED FROM
A WOMAN FOUR MONTHS PREGNANT.

Mrs. H. T. S., æt. thirty-eight years, married fifteen years; three children, oldest thirteen years, youngest seven and a half years; two miscarriages, one soon after birth of first child and one three years ago. Pregnant four months. Pain in right ovary since birth of first child. An ovarian tumor the size of an adult head was diagnosed by myself a

year ago. Operation advised and refused. Returned about February 1, four months pregnant, with tumor but little increased. Ovariectomy February 11, 1893, at the Woman's Hospital, assisted by Drs. J. T. Binkley and Marie White. Found a dermoid ovarian cystoma in the right iliac and umbilical region, completely embedded in old organized peritoneal, omental, and intestinal adhesions. During a tedious enucleation the cyst wall broke and emptied some fluid with a fecal odor and of the color and consistence of pus, which was carefully wiped out. The pedicle was quite long and was tied about one inch from the uterus. The abdominal cavity was flushed with hot water. As the uterus, enlarged from a four-months' pregnancy, filled up the cul-de-sac, two glass drainage tubes were introduced, a long one extending to the right lumbar region and a short one to the pelvic brim a little to the left of the median line. The peritoneum, muscle, and all layers of fascia sutured with a single row of silkworm-gut sutures. The subcutaneous fat, which was nearly two inches thick, and the cutaneous edges were allowed to gape open unsutured. Dry absorbent cotton was laid between the raw edges. Drainage tubes out in forty hours. The cotton on the open wound was changed every four hours during the first few days, then four times daily, then three times, and finally twice daily. The sutures were taken out in two weeks. The wound has been dry from the beginning and the cutaneous edges have closed, so that to day, five weeks from the operation, there is a narrow line of dry, glazed connective tissue along the line of incision. Nothing but dry cotton has so far been brought in contact with the wound. The temperature never went above 100.4° F., except at the end of the fourth day, when it went to 102.4° and was accompanied by vigorous and painful uterine contractions. One dose of morphine dispelled these and relieved the temperature permanently. Until the last ten days there had been a frequent return of abdominal pains without temperature, but always promptly relieved by one dose of morphia. They have now almost ceased to return.

The interesting features are the tolerance of the pregnant uterus to a severe abdominal operation lasting two hours, the apparently more than ordinary vitality displayed by the peritoneum during pregnancy, the method of suturing the incision in a fat abdomen by accurate suture of the peritoneum and fascia only, and the healing of the open wound of fatty tissue of twelve square inches of surface, without any cleansing or dressing except dry absorbent cotton, and without the occurrence of suppuration.

Dr. F. BYRON ROBINSON presented a specimen to illustrate

GERLACH'S VALVE IN THE CECUM.

It is well known that men and women do not suffer from appendicitis to an equal degree. Bamberger, of Vienna, used to say that men had appendicitis six times as often as women. No doubt this is too high, but still any one who carefully watches persons who are attacked with appendicitis will readily observe that men are attacked much oftener than women. There is a kind of explanation why men suffer from appendicitis more frequently than women, and the specimen which I present to-night aids the explanation. If one examines a goodly number of bodies he may observe that the fold of mucous membrane which surrounds the mouth of the vermiform appendix varies very much in condition and size. In young men the fold of the valve appears quite large and almost closes the opening in the appendix. In old men the valve atrophies and leaves quite a wide mouth. This wide mouth is what allows old men to escape appendicitis. In women the valve around the mouth of the appendix is small and does not close the opening. Now, an appendix with a wide-open mouth will allow any foreign body to drop into it and also to drop out of it again, and in this manner no irritation will arise in the appendix. In the young man, with a long Gerlach valve closing the mouth of the appendix, the matter is quite different. Just as soon as a foreign body drops into the appendix through Gerlach's valve the irritation induces the mucous membrane to swell, and Gerlach's valve then closes the mouth of the appendix completely and no drainage is allowed. The result is an abscess or a collection in the appendix. Hence young men have more appendicitis than women, on account of the large size of Gerlach's valve in men. The valve is small in women and atrophied in old men.

April 21, 1883.

The President, DR. E. J. DOERING, in the Chair.

Dr. L. HEKTOEN.—I wish to narrate two instances of peculiar

LESIONS CONNECTED WITH THE VERMIFORM APPENDIX

which I observed post mortem. One instance occurred in a man with a fecal fistula opening in the right groin below Poupart's ligament. He had been operated upon in Germany for an inguinal hernia. An opera-

tion was made for the fecal fistula, which terminated fatally. The post-mortem examination showed that the fistula was due to a patent vermiform appendix lying in the inguinal canal, the opening in the appendix being at its free end.

The second instance of peculiar lesion about the appendix is somewhat similar to the one cited by Dr. Jaggard at the last meeting, as illustrated by the specimen shown by Dr. Holmes at a meeting of this society two or three years ago. In this case, as in the one of Holmes, the appendix was adherent to the rectum, and there was a fistulous connection between the appendix and the rectum. In addition there were in my case adhesions binding the appendix and the rectum to the right ureter, and also an opening into the right ureter. Through this opening an ascending ureteritis and pyelonephritis had occurred.

Dr. T. J. WATKINS.—I have one or two cases I would like to put on record. One case is somewhat similar to the case reported. There was present an inflamed and dislocated left Fallopian tube, which had become attached to a suppurating mesenteric gland. The gland contained about one drachm of pus, and in separating the adhesions and removing the necrotic tissue the intestine was slightly opened. Two or three Lembert sutures were inserted and no difficulty resulted. If this case had not been relieved it would probably have terminated in an abscess which would have communicated with the intestine.

Another case was a young boy fifteen years old. He had the usual enlargement at the head of the cecum seen in perityphlitis. The abscess was opened and drained without infecting the peritoneal cavity. When flushing out the abscess cavity a capsule was washed out, about the size of a three grain quinine capsule, which was as hard as stone. It was afterward learned that the capsule had been given to the boy three weeks before for constipation. It had probably been in the house for three months.

In another case the abscess was located in the median line in front of the uterus. The sac of the abscess consisted almost entirely of omentum. The patient had had an inguinal hernia, which for some years had not troubled her. It had always been reducible. She was running to catch a train when she felt a very severe pain in the median line just above the pubes, and following she had elevation of temperature, severe pain, and the formation of the abscess described. The abscess communicated with the bowel.

Dr. H. P. NEWMAN.—In regard to the relative frequency of appendicitis in male and female, I believe, with Dr. Jaggard, that it is

not so much greater in the former as has been supposed. The reason why the affection appears to be more common in the male is undoubtedly due to the fact that it is not so easy in male cases to mistake the diagnosis as in females, where we have so many pelvic troubles with symptoms not unlike those associated with appendicitis.

I have twice had the misfortune to operate on advanced cases in the male after the abscess had broken into the peritoneal cavity and the patients were in a state of collapse. In both cases they promptly died after the abdomen had been opened and all possible measures taken for relief. One of these patients was said to be suffering from typhoid fever, and the other was simply "suffering"—without any diagnosis. I did not see either of them until after the stage of collapse had been reached. It is to be feared that such instances of mistaken diagnosis are not rare, and we know it is not infrequent, in doing laparotomies or operating for pelvic troubles in the female, to find disease of the appendix. So it seems to me that if it were possible to compile our statistics with any degree of accuracy we should find that this disease manifests little partiality for either sex.

Dr. L. L. McARTHUR.—I have had thirty-five cases of appendicitis requiring operation. These thirty-five cases were subdivided into acute suppurative appendicitis, gangrenous appendicitis, and catarrhal appendicitis. Of the acute appendicitis cases, twenty-three in number, all recovered with simple opening of the abscess. The operation in the majority of these cases was done between the fifth and ninth days, the earliest in the third day of the symptoms of abscess. In every case it was possible to open the abscess extraperitoneally because of the tumefaction enabling one to locate the point of greatest induration in nearest proximity to the abdominal wall; and if the incision chanced, as it did in two cases, to overlap the peritoneal adhesion, a stitch or two of fine silk enabled one to close the peritoneum before opening the abscess proper.

From these cases, all recovering by opening the abscess without removing the appendix and thus endangering the patient from extravasation into the general peritoneum of the infective material which these abscesses contain, I have concluded that it is wise not to attempt to remove the appendix when floating in the abscess cavity. In three cases I have washed out, by simple irrigation, the appendix in the form of a slough. As the majority of these were hospital cases, I have not been able to follow them for a long period of time. I know, however, that but two of them returned to me for a second operation—that is,

with symptoms of the return of the trouble. In one case that returned six months after recovery from first attack, with symptoms of commencing new abscess, I was called at midnight to the hospital, and, eighteen hours after the first symptom, opened the abdominal cavity with the idea that I could at that early period get into the neighborhood of the appendix and remove it before the general abdominal cavity would be endangered by the escape of pus. On making the incision through the peritoneal lining of the abdominal cavity, the latter was found bathed in pus, and the patient died in three days. In the other case a sinus formed beneath an old cicatrix, and by simply washing it out for a few weeks it got well. Of the ten cases on which I operated where the abscess had already broken, the patients all died. Where the general peritoneal cavity was bathed in pus, no amount of careful washing and sponging, no use of Mikulicz tampon, or any method of treatment, enabled me to save these cases.

Of the gangrenous cases of appendicitis I have had but one. I was called in consultation with Dr. Wing during the second twenty-four hours of the attack, the patient being in a state of collapse, with a subnormal temperature, and apparently moribund. As a last resource it was determined to open the abdominal cavity and see if the diagnosis was correct, and, if possible, do something for him. The diagnosis was ruptured appendicial abscess. No tumor could be felt over the classical area. No fluid in the abdominal cavity, indicated by the change of position, but on opening the abdomen the appendix, after a little feeling for it, was brought up with the caput coli and found in a bluish-black condition, which was probably strangulation through an inflammatory action at the neck of the appendix. Ligation of the appendix was practised, and a simple collar of peritoneal covering reflected over the ligature. This patient made a good recovery. It surprised me in these cases that the gangrenous appendix, lying as it did loose in the abdominal cavity, had caused no lymph exudate, had apparently not obstructed the other tissues against which it lay, but simply made a condition of profound toxemia.

Of the three cases of recurrent or catarrhal appendicitis that I had, all were operated upon in the interval between the attacks. All had a history of having three, four, seven, or more attacks of pain, slight tumefaction, temperature and distress, that caused their physicians to send them to this city and to the hospital for operation. In the cases operated upon between the attacks the appendix was always found thickened and indurated; its muscular and mucous coats under the

microscope showing a marked thickening and induration, and between the muscular and mucous coats a large deposit of fibrous tissue.

I wish to mention another case of appendicial amputation which was peculiar in that the inflammation and the thickening had been induced by the pressure of a truss that was used to keep back an appendix which formed the contents of a hernia. I operated on this child for a hernia. A peculiar sausage-shaped, blunt-extremity tumor formed the hernial contents, lying in the inguinal canal much like a slender cigar; it would slip back nearly out of the canal when pressed, but immediately pressure was removed would slip down into the canal again, and after awhile the conclusion was reached that it was an appendix, and this was ligated and removed.

It was shaped like a cigar, but was more nearly the size of a fountain penholder, was about three inches long, and its anatomical structure was like that of an appendix and terminated in a blind sac. Microscopical section showed it to be like the structure of the appendix, long and slender, but markedly thickened compared to the normal appendix.

From this experience, which has been rather a fortunate one for one so young in the practice of surgery, I have come to these conclusions: 1. That there is in cases of appendicitis a period of choice as to when to operate. Cases in which the symptoms of appendicial abscess are present sufficiently to require it should be operated upon, in my opinion, within the first twenty-four hours, or, if that be passed, wait until the formation of the tumor, and especially the formation of adhesions strong enough to form an abscess wall; waiting until the fifth, sixth or seventh day, unless the temperature ranges very high, the toxemia is great, and intestinal obstruction and vomiting symptoms are marked, when, of course, we infer that the contents of these abscesses are under great pressure and there is great danger of the abscess breaking, and to avoid that danger a somewhat earlier operation should be made. 2. I have also come to the conclusion that an effort should be made to open the abscess without opening the abdominal cavity, when feasible, which I think is in the majority of cases. 3. That the point of incision should be over the point of greatest flatness on percussion. 4. That the line of incision, so far as subsequent hernia is concerned, makes but little difference, if one be careful to approximate the surfaces in stitching up the wound to the point in which the drainage tube is inserted. To avoid hernia in these cases I have a number of times separated with the handle of the scalpel the fibres of the ex-

ternal oblique in their direction, and the fibres in the internal oblique and transversalis in their direction, in that way making a simple separation in the muscular fibres, and not cutting them, so that when relaxed they fall back into their place again, and the abdominal wall is not weakened by cutting them. This is in many cases feasible.

While the point raised by McBurney as being the point of greatest tenderness is accepted now as being a classical symptom, I think the point may vary greatly from a point midway between the umbilicus and the anterior superior spine.

I would say, in answer to Dr. Robinson's remark as to the gangrenous appendix, I believe the appendix was in a state of impending gangrene; it was only thirty-six hours from the commencement of the trouble that the appendix was removed. Certainly the circulation was so disturbed by constriction at its attachment that it had been completely cut off. It was a bluish-black color, such as the toe assumes before it begins to dry up with gangrene; it had produced all those symptoms which accompany gangrene in the abdominal cavity. There is nothing more frightful than the effect of commencing gangrene in the abdominal cavity; and inasmuch as the man was supposed to be dying, we opened the abdominal cavity. His pulse was 140 to 160, there was cold perspiration, the temperature was down to 96°. We thought it was a ruptured abscess and that we could do something by washing out the abdominal cavity; in another twelve hours or more it would probably have made a complete gangrene and certainly caused death.

DR. F. BYRON ROBINSON.—There is one point I wish to speak of, and that is in regard to gangrene being found in the abdomen with recovery. Several years ago Dr. McBurney, of New York, published a list of cases of appendicitis on which he operated. I frequently noted that Dr. McBurney recorded a gangrenous appendix, ligated it off, and the patient recovered. I am inclined to take exception to the doctor's interpretation. I think that in those cases the appendix was highly congested and edematous, but not gangrenous. If one will take one of these dark pieces of tissue and wash out the venous blood, it may be frequently observed that the tissue remaining is quite normal in appearance. It must be accepted that an appendix lying *free* in the abdominal cavity, without adhesions and gangrenous, is rare, and still more rare that a patient will recover after the removal of a gangrenous appendix. Gangrenous tissue lying in the free abdominal cavity is almost always fatal. Dr. McArthur also reports a case to-night of gan-

grene of the appendix, and that around the appendix there were no adhesions, and that he ligated it off and the patient recovered. I would very much like to have seen that appendix put into clean water and the black blood washed off. I am inclined to think the operator would have found simply a congested, edematous appendix. Gangrene of any tissue in the abdominal cavity is very rare with recovery of such patient. Dark-colored tissues are not always gangrenous. When tumors are twisted off their pedicles they do not gangrene in the abdominal cavity. The irritation produced on their surface and in the surrounding organs induces local exudates, which organize and support the tumor. I have performed laparotomies where the tumor was entirely twisted off its pedicle and caught up and nourished by the omentum. Gangrene in the abdominal cavity nearly always comes from tapping, and occasionally through the digestive and genito-urinary tracts; but rarely with recovery. I will risk my reputation on the idea that gangrene occurring in the abdomen with successful operation and recovery is more rare than reports will show. I am fully aware that the appendix is not infrequently found detached from its root, and that it must have fallen off from a suppurative or a gangrenous process; but in such cases it is not free in the abdominal cavity, but has been hemmed in by adhesions. The old abscess in which the appendix dropped has been absorbed down to an old cicatricial adhesion. That is a limited gangrenous process. In my experience the so-called classical McBurney point in diagnosing appendicitis is about useless. The disease is where the pain and exudates are. Personal work in the dissecting room and post-mortems would indicate that the appendix hangs in the pelvis in twenty per cent. of women. How, then, does one expect to get pain and tenderness midway between the umbilicus and anterior superior spine of the ilium? The appendix may be under the liver, in the pelvis, in the left iliac fossa, or in the so-called normal position. Pain and tenderness will be found wherever the appendix allows the infection to escape.

I saw a girl of about fifteen last night. I think she has appendicitis. There is a lump, about the size of a cocoanut, on the left side. The hymen is intact, and, so far as we know, the tube is all right. McBurney's point is not a particle of good.

Another thing I am highly in favor of is the incomplete operation. If there is appendicitis and you do not find the appendix very easily, let it alone; it may not be polished surgery, but they get well. The relation of pelvic diseases to the appendix is getting clearer every day.

The appendix often infects the pelvic organs; that is common. I have seen that in Tait's operations, where he had a great number of them. Once in a while the appendix would be adherent to the broad ligaments, and there is no doubt that the pelvic organs are frequently infected through the rectum or gastro-intestinal tract.

DR. CHRISTIAN FENGER, in closing the discussion, said: In regard to all the interesting material that has been brought out I shall make only very brief remarks.

Dr. Williams and also Dr. Jaggard have called attention to the occasional occurrence of multiple but separate accumulations of liquid exudate, and this fact is of the utmost importance at the time of operating. It would seem in such cases that the operation in the free peritoneal cavity would be preferable to the localized operation.

If we cannot make the diagnosis, however (as Mikulicz could in his chronic case), should the patient with a single cavity be subjected to the same treatment as the patient with multiple foci? This, it seems to me, is one of the barriers to our action, now insurmountable, but which may in the future be removed as our clinical knowledge increases.

Dr. Williams' second case, with sudden exacerbation, attended by collapse which could not have been prevented, might be considered as an argument in favor of indiscriminate early operation.

I fully agree with Dr. Jaggard as to the difficulty of differential diagnosis between appendicitis and pelvic suppuration from salpingitis. Many cases cannot be diagnosed until the time of operation or at the autopsy. The operative treatment, however, should be the same: opening through the vagina or rectum in chronic cases, and laparotomy in acute cases. In both appendicitis and salpingitis the removal of the offending organ is desirable. Opening and drainage may bridge over the acute danger in the limited accumulations and permit a radical operation under more favorable circumstances later. The removal of the appendix or tube through the free peritoneal cavity, in cases where the inflammation is as yet limited, exposes the majority of patients to a danger greater than that of non-operative interference followed later by simple incision. In the acute stage, where laparotomy is demanded, it does not make the operation much more extensive to search for the appendix.

To Dr. Van Hook's complaint that the clinical aspect of this question was not adequately considered, I would reply that it is difficult in an article to paint a clinical picture of any value as regards the differ-

ential diagnosis between localized and non-localized, suppurating and non-suppurating inflammation around the appendix. This can be done only at the bedside.

Sonnenburg's two-tempo operation, which Dr. Van Hook advocates, was occasionally resorted to long before Sonnenburg's paper was written. It has not been used to any extent by other operators, and Sonnenburg himself has abandoned it. In the majority of cases of perityphlitic abscess it is unnecessary. The cases of acute spreading peritonitis require immediate operative treatment to relieve sepsis, and the two-tempo operation with an interval would not be advisable.

Dr. Henrotin is to be congratulated upon his successful operations in the two desperate cases he mentioned. He has raised an important question in the entirely new proposition of making an opening in the cecum to evacuate gas and feces, and thereby to obviate the danger of tympanites and at the same time to drain the peritoneal cavity. This is important if it will help a patient with diffuse peritonitis to a recovery which might not otherwise take place. We know that some patients with gangrenous hernia, or perforation into the hernial sac, get well when this is opened and an artificial anus established, but we do not know how much peritonitis those patients who live really had. The artificial anus is an incumbrance, but if it will save life it is justifiable.

Dr. McArthur in his extensive experience has followed about the same plans and has had about the same results as other operators. The cases of diffuse peritonitis died, and the localized peritonitis patients recovered and were operated upon without regard to the appendix.

I fully agree with Dr. McArthur that the operation should be done within the first twenty-four hours in the few desperate cases, or should be deferred until the storm is over in the great majority of ordinary cases. The difficulty of early operation is that in a large number of these cases the onset is so gradual that it is impossible to say when the acute symptoms which indicate the time for operation commence.

If we follow Sonnenburg's classification and consider the fatal cases as hopeless diffuse peritonitis, and the non-fatal cases as localized but possibly later diffused—that is, as so many lives saved—then the prognosis of early operation is good. But this is a somewhat artificial method of argument. Who knows how many of the non-fatal cases would have recovered without operation, or whether some of the fatal cases would not have recovered if operation had not been resorted to?

Avoidance of hernia by separation of the abdominal muscles is cer-

tainly a good plan, and has been employed, for instance, in gastrostomy I cannot see, however, how this could be done except in the localized cases in which the opening is small.

Dr. Robinson is to some extent right in his statement that gangrene is extremely dangerous and that it is probably less common than is ordinarily supposed; but partial gangrene of the appendix is exceedingly common. No process will take away part of the appendix, except gangrene, and we often find cases in which part of the appendix is gone. The entire appendix has been found in several cases in the abscess cavity. Consequently gangrene does not necessarily cause death nor does it prevent limitation of the disease.

In conclusion, it seems to me, after going through the literature on this subject, that the gulf between the advocates of the early radical, and later more conservative, plans of treatment is not so wide as it appears. It is rather the accentuation or drawing forth into prominence of one or the other side. All agree that light cases need no operation. No one of the advocates of early operation will operate upon every case he meets, but he accentuates the early cases. In like manner the conservatives give especial prominence to the operation in severe cases only, and to the fact that so many patients recover without operation. But when it comes to the individual case there will probably be only slight dissension as to the line of action to be pursued.

DR. F. BYRON ROBINSON presented a specimen of the

UTERUS OF A MULTIPAROUS SOW,

which demonstrated Gärtner's duct very beautifully. The duct courses from a point near the ovary, along the uterine horn, and is lost on the vagina. The duct is as large as a lead pencil and is very tortuous. It will be noted that the continuous duct is interrupted by atrophy of several segments. The thread of evolutionary development is best caught up by examining the lower animals for vestigial remnants of fetal life. Gärtner's duct represents the segmental duct of the mesonephros, and the vertical tubules of the parovarium represent the uriniferous tubes of the middle kidney. I have seen Gärtner's duct in woman as large as a child's head, and it is common to see one of the vertical tubules of the parovarium enlarged (after a girl is 15). The sow and cow show Gärtner's duct typically. I have seen Gärtner's ducts end on each side of the ureter, and I could insert my little finger into their mouths. There is but little doubt that Skene's ducts are the ending

of Gärtner's ducts. I have examined the genitals of over three hundred sows, and they present a very great variation in regard to the persistence of Gärtner's duct. Occasionally it persists almost entire for three feet, but usually is irregularly obliterated by absorption. I never saw a swelling in this duct as large as a common marble in three hundred and fifty sows. It is curious to note that the genitals of a sow vary very much. The ovaries are of all sizes, from a bean to the size of a turkey egg. The ovaries lie in a distinct pouch of peritoneum, into which the enormous, wide mouth of the fimbriated end of the Fallopian tube ends. The ovules of a sow can hardly escape getting into the tubes, as they fall into the peritoneal pouch, and the mouth of the tube opens directly into the pouch. The pig gestates in the horns of the uterus, and has a universal placenta, while man's is discoidal. The Fallopian tubes are very small, hard, and tortuous. Curiously enough, I cannot find in literature, nor can good veterinary physicians tell me of a single authenticated case of tubal pregnancy in the lower animals. The cow and monkey very closely approach man in structure of tubes and ovaries. The monkey's ovaries which I examined were so like the human that I could see no difference, except in size.

TRANSACTIONS OF THE SIXTH ANNUAL MEETING OF
THE AMERICAN ASSOCIATION OF OBSTETRICIANS
AND GYNÆCOLOGISTS.

Held in Detroit, Mich., June 1, 2 and 3, 1893.

(Abstract).

The President, LEWIS S. McMURTRY, M.D., of Louisville, in the chair.

DR. GEO. F. HULBERT, of St. Louis, Mo, read a paper entitled

INTRA-UTERINE ASPHYXIA, WITH REPORT OF THREE CASES.

The first case was delivered in a perfectly normal way by natural force; the two subsequent ones were instrumental. In all of them he was certain that he heard the fetal heart not longer than one-half hour before delivery was accomplished; heard it distinctly, but somewhat weakened in its force. At the time of delivery in all, the appearance presented by the children as they came through the vulva was one of extreme pallor, with slight if any evidence of cyanosis, save a deepened tinge of the lips with absolute muscular relaxation. The hearts

were pulsating at the rate of from 40 to 50 per minute. The usual methods of artificial respiration were resorted to in all, to the extent of introducing the catheter into the trachea and thereby insuring a passage of air into the bronchial tree and alveolar spaces. That the air did penetrate was further evidenced by the slight crepitus easily heard during compression of the chest in the expiratory part of the respiratory act. Artificial respiration was maintained until the heart ceased to respond to the stimulus presented by the aëration of the blood. In none of them were there any external evidences of pathological conditions, development having been well accomplished. The umbilical cords were normal, and it was only when the placenta was reached that there were any conditions present that might possibly account for the peculiar condition of the children. Here in all three cases there were found blood clots occupying the placental surface in over half of its area. These clots were well formed, intimately attached to the placental tissue, smooth upon the uterine side. There was nothing indicating the fact that the clot had been torn from the uterine surface, but rather that placental separation had taken place and the clot had formed and become adherent to the placental tissue. So far as the mothers were concerned, they were in average good health; the first primipara, the last two multiparæ. The labors were of not over twelve hours' duration. The pains were not sustained and vigorous in any of them, but rather short and inefficient. In none of these cases was chloroform used, and in only one, the first, was a rectal injection of twenty grains of chloral given during the first stage; the compression upon the head was not at all excessive and would not have attracted attention. In the last two cases there was no pulsation appreciable in the cord; in the first place he had no record of this fact. The children were separated from the mothers immediately, and in the first a small amount of blood was permitted to flow through the severed end of the cord. Unfortunately in none of them did he obtain a post-mortem, and, as before stated, the only anatomical lesion that he could testify to is the presence of the blood clot occupying an extensive part of the area of the placental surface. There was only a moderate amount of the amniotic fluid; dilatation was well advanced before the membranes ruptured; in the last case rupture occurred at the beginning of dilatation. The points for consideration in the above are:

(a) The presence of the fetal heart pulsations so soon before delivery. (b) the normal character of the labor. (c) The extreme pallor

and relaxation of the child at birth. (*d*) The presence of the cardiac pulsation after delivery. (*e*) The absence of any attempt upon the part of the child to perform the respiratory act. (*f*) The response upon the part of the heart to artificial respiration. (*g*) The anatomical conditions presented at the placenta.

DR. WILLIAM H. WENNING, of Cincinnati, read a paper entitled

PLACENTA PREVIA, A STUDY OF ITS PATHOLOGY.

The pathology of placenta previa is far from being definitely settled, owing to the discrepancy between clinical phenomena and anatomical demonstrations. The term originally meant simply the fact of the after-birth lying before, which might apply to a prolapse of the placenta as well as a primarily low insertion. At the present day it implies a fixation of the placenta to the lower pole of the uterine cavity. Omitting minor points of discussion, the placenta may be said to be previa when it is inserted wholly or in part to that portion of the lower uterine segment which is subject to distention in pregnancy or labor. In accordance with this definition, the locality and amount of implantation will further determine the variety or form of placenta previa.

The typical variety is that known as central placenta previa, although the placenta rarely is found implanted in such a manner that the centre of the placenta corresponds to the centre of the inner os uteri. A better term would be placenta previa totalis, or complete placenta previa. By partial placenta previa is meant a condition in which placental tissue covers the os internum only in part, so that whilst a portion of the placenta overlies the os when dilated, the larger part is attached to the side of the uterus, hence an incomplete placenta previa. Because it is attached to the side of the uterus it is also called lateral placenta previa.

By marginal placenta previa is understood simply a low insertion, but sufficiently high that its margin reaches to, but does not cover the os internum. The last two are often regarded as synonymous, although the clinical features are entirely different. Some confusion is caused by this want of conformance by different authors in defining the last two varieties—partial and marginal—properly. The writer thought that the terms central and partial should be dropped, the former because the placenta is very rarely exactly central, the latter because it does not clearly express the anatomical relationship to the uterus, and

the terms total and partial, or, still better, complete and incomplete placenta previa substituted. Furthermore, central and lateral are used more in reference to the clinical than anatomical situation, to express the amount of hemorrhage.

The same terms are not applicable with the os dilated. For instance, a central (total) placenta previa in which nothing but placental tissue can be felt through an os but slightly dilated might become lateral (partial) with full dilatation, because at this time the membranes could be felt alongside of the placenta.

From all this he concluded that a true understanding of the fact could be arrived at only from an anatomical standpoint. Formerly the pregnant uterus was considered merely as a hollow, muscular organ divisible into two parts, the body and cervix, the former contracting, the later dilating in labor. Separation of the placenta could take place only by contraction of the body or dilatation of the cervix. But as contraction of the uterus under normal circumstances occurred only during labor, detachment of the placenta previous to this period could be only *accidental*; but dilatation of the cervix was a necessary event in the beginning of labor, and with those who believed in the actual shortening of the cervix in the latter months of pregnancy the placenta became *necessarily* detached, hence the terms accidental and unavoidable hemorrhage of Rigby, Levret, and others.

The writer then showed the inexactness of these definitions, because first, every hemorrhage before labor, even that from placenta previa, would have to be classed among the accidental; and, secondly, because accidental hemorrhage, as defined by Rigby, could occur only if a placenta was normally inserted, whereas we know that there must be some predisposing cause for the spontaneous separation of the placenta. Then, again, when it was demonstrated that the cervix remained closed until the onset of labor, and that the shortening was apparent rather than real, no physiological reason could be assigned for hemorrhage from placenta previa during pregnancy. To add to the confusion, Duncan, who did not accept the actual shortening of the cervix, described all hemorrhages in placenta previa that occurred previous to labor as accidental. For this reason, as these terms had lost their original significations, they should be dropped.

The investigations of Müller, Lott, and Bandl on the anatomy of the lower segment of the uterus in the latter months of pregnancy threw a new light, also, on the anatomical condition in placenta previa but, as Bandl maintained that the lower portion of the uterus was in

part made up of the cervix, the *unavoidable* feature was again explained. until, still more recently, the demonstration that the formation of the decidua was limited by the os internum and did not cover the cervical portion, hence the cervix did not contribute to the formation of the lower uterine segment, the original question was again opened.

The writer was therefore of the opinion that a definite understanding of the morphology of the uterus in normal pregnancy and labor was necessary to appreciate the conditions in placenta previa.

The uterus of gestation is divisible into three parts in advanced pregnancy, the upper and lower segments of the body, and the cervix. As the cervix is only operative in labor, the anatomical changes in the body interest us most in pregnancy. The most important feature is the ring of Bandl, because it divides the uterus into two segments physiologically distinct from each other. But in order to study the implantation of the ovum, and, consequently, also of the placenta, it is convenient to sub-divide the upper segment into two portions, the upper or fundal, and the middle; and below this lies the lower uterine segment, between the ring of Bandl and the os internum. This would correspond to the fundal, equatorial, and cervical zones of Barnes. Barnes seems, however, to make the division of the first simply arbitrary, but the writer suggested that all of the portion of the cavity above the uterine insertion of the oviducts be termed upper or fundal, and the zone below this line and above the ring of Bandl, middle or equatorial. The writer regarded this distinction as important, because it concerned the question of primary implantation of the ovum. He was of the opinion that the impregnated ovum, when it entered the cavity, was most apt to be caught in the decidua *below* the insertion of the tubes and *above* the ring of Bandl (or what would later on correspond to this circle), and *that this is the normal implantation*; everything above and below is abnormal; hence the extremes of the poles of the uterus are not the normal habitat of the ovum. In placenta previa this was self-evident, because it is universally recognized that the lower the implantation the more previa the placenta will be. In the upper or fundal wall the clinical features are wanting, but a careful examination of the rent of the membranes after labor would show that the placenta is situated very rarely just opposite this point.

If the ovum strike the most dependent part, which afterward becomes the lower or cervical zone, we will have the lowest insertion of the placenta—a placenta previa totalis. If it fall not quite so low, but at a point near or upon the border line of that ring which after-

ward becomes the contraction (Bandl's) ring, the placenta will invade partly the middle and partly the lower zone—a partial or incomplete placenta previa. If implantation occurs above the ring of Bandl and to the sides of the uterus, we have a truly lateral implantation of the placenta, but not previa. Hence the reason for discarding the term “lateral placenta previa.”

When the ovum becomes attached to the fundus of the uterus the insertion is fundal, but, owing to the anatomical relation of the tubes to the cavity, and the influence of gravity when the ovum reaches the womb, the writer looked upon fundal implantation as rare. He regarded it not so much a question of partial or total implantation, as the fact that the placenta develops primarily in the lower uterine segment, which is borne out by the clinical symptoms.

In the early months of pregnancy, the area of implantation being small, the placenta will develop for a while in conformity with the growth of the womb; but if attached to the lower zone a limit of expansion will be reached and the one of the two things must happen: either rupture of the placental tissue, or, more commonly, separation from the uterine wall takes place, followed by hemorrhage.

In labor the largest portion of the uterus is drawn upward from the fetus. Above the contraction ring the uterus is contracted, or, rather, retracted; below it, greatly distended. In placenta previa with continuance of dilatation each pain detaches new portions of placenta. It is not so much the descent of the placenta as the ascent of the uterus that characterizes the change of situation. As long as the placenta can follow the uterus in its upward retraction, little separation can occur; but if the placenta cannot follow the uterus, the latter is drawn away from the former and hemorrhage results.

This is the philosophy of action of the bag of membranes. When the amniotic sac remains intact to the very end, the placenta cannot follow the uterus; but if it be ruptured before the period of complete retraction, the placenta can follow the uterus, for a while at least, in its upward course, by which further detachment is postponed.

In short, the whole mechanism is explained by the three properties of the parturient uterus: contractility and retractility of the upper segment, dilatability of the lower segment.

The writer then enumerated various other theories at length, but concluded that for the present the theory that the development of the lower uterine segment explains the clinical and anatomical features of placenta previa, and that placental separation is the result of expansion

of this portion of the uterus, is most rational and satisfactory.

DR. JAMES F. W. ROSS, of Toronto.—The different theories that have been advanced regarding the cause of abnormal implantation of the placenta have been thoroughly argued by the essayist, and it is difficult to say which one is the best to pin our faith to. My own ideas regarding the subject are that there must be some very close connection between the frequency of the production of the left occipito-anterior presentation at a later period of life and the peculiar normal implantation of the placenta. The doctor holds that the upper implantation is as abnormal as the lower. I think the most frequent implantation of the placenta is that described by him as on the side of the uterus, in the middle zone, running up into the upper zone.

DR. WILLIAM W. POTTER, of Buffalo.—I am a little disappointed because the author did not enter into the treatment of placenta previa. I know that I express the views of the members present when I say there can be nothing but admiration for the splendid manner in which he has presented the pathology. We would like to have Dr. Wenning's views in regard to the management of these cases, so that this phase of the subject can be taken up in the discussion.

DR. GEORGE F. HULBERT, of St. Louis.—The author of the paper spoke of the cause of the abnormal implantation of the placenta. The only point I wish to make in that respect is the possible explanation of why we have various phases of placental implantation; that the real element in it is simply the question of nutrition. The usual understanding of the process is that the ovum is projected from the opening of the Fallopian tube into the uterine cavity; that it is immediately cared for by the hyperplastic mucous membrane or covering which has been denuded partially from the superficial layer of epithelium, and the nutrition is insured simply on account of the resistance between the peculiar tissue upon the outside of the ovum and the tissue presented by the mucous membrane in the cavity of the uterus.

DR. JOHN C. SEXTON, of Rushville.—I would like to know if there is a different feel to the cervix, either through the os or external to it, by which one can be guided as to which side or other of the cervix the smaller implantation of the placenta may be.

DR. WENNING.—I am glad the doctor asked that question. It is practically impossible to tell with positiveness which side is implanted. We only have our clinical experience to guide us. In a great number of cases the smaller implantation is to the left; consequently it is better to proceed toward the left in dissecting than to the right.

DR. JOHN M. DUFF, of Pittsburg, read a paper entitled

THE CARE OF PREGNANT WOMEN.

DR. EDMUND M. POND, of Rutland, Vt., read a paper on

DILATATION OF THE CERVIX FOR DYSMENORRHEA,

in which he advocated the use of a light Palmer dilator and packing the uterus when the cervix was elastic, this to be repeated if necessary. If this failed a heavy dilator was to be tried. But in cases where the cervix was long, conical, and cartilaginous, after the above method had failed, the free division from the internal to the external os, dilatation with a light instrument, and introduction of a stem to be worn from ten to fourteen days, was to be recommended. Considering the good results from dilatation, it was the duty of every physician to at once relieve stenosis of the uterus, even in young girls, for it caused years of suffering at menstruation, with gradual increasing symptoms indicating congestion of the uterus and appendages; and if this condition was allowed to go on, the irritation from retained secretions in the uterus and tubes, and the congestion, would in time produce permanent disease of the appendages.

DR. J. HENRY CARSTENS, of Detroit, agreed with the author's conclusions and the necessity of treating cases early. We have all seen various symptoms as the result of stenosis, not only dyspepsia, but most marked nervous, epileptic, and hysterical phenomena, relieved by dilatation. The inevitable result of such obstruction finally causes disease of the uterine appendages.

I must disagree with the author in regard to his method of treatment by cutting. I do not see why we should cut any more than we should tear for the relief of this condition. The trouble is not in the mucous membrane; it is in the submucous tissue, and some of the muscular fibres contract and cause spasm. The mucous membrane can be stretched, without being torn, by means of a dilator. Cutting into the mucous membrane is liable to cause septic absorption from the raw surface.

DR. HOWARD W. LONGYEAR, of Detroit.—Very much can be gained by dilatation without adding the danger of septicemia from scarification, and I do not practice the latter at present. In regard to packing with gauze, I was in the habit at one time of doing this after dilatation, but I found my patients almost invariably had a rise of temperature twenty-four or thirty-six hours thereafter until I took out the gauze.

Since I have been using a self-retaining hollow stem pessary my patients do not get a rise of temperature, and I follow that practice at the present time.

DR. JAMES F. W. ROSS, of Toronto.—There are many cases of dysmenorrhea that cannot be cured by dilatation alone. I have dilated, packed, curetted, and used pessaries in cases, and still found that the dysmenorrhea has continued. The women have subsequently married and become happy mothers of live children. I think there is danger, perhaps, in the profession to overtreat dysmenorrhea. It seems as natural for some women to have pain during menstruation as it is for others to have an increased flow during the menstrual period. I am opposed to the use of the stem pessary. Many a pus tube began subsequent to the use of a stem pessary. I see no objection to its use for a short time but to allow it to remain in the uterus for a long period is not a safe procedure. I think frequent dilatation will answer every purpose without the danger that is inherent in the stem pessary.

DR. J. HENRY CARSTENS, of Detroit.—Please explain how the presence of a silver or rubber stem pessary in the uterus will cause septic trouble.

DR. ROSS.—I remember, while I was with Mr. Tait, seeing one case in which a rubber stem pessary had been applied. Mr. Tait said: "This is the last time I will use a stem pessary. I was tempted to do it in this case." The patient's pelvis was matted together with inflammatory adhesions, and Mr. Tait attributed the inflammation to the use of the stem pessary. I consider that it irritates the parts, just as a silver sound will irritate the urethra in the male. If you tie a silver sound through a stricture in the male you will have a good deal of irritation; if you tie a silver catheter in the bladder you will have a good deal of irritation. I believe it is due to irritation of the tissues.

DR. LONGYEAR.—I agree with Dr. Ross that a pessary should not be left in indefinitely.

DR. M. ROSENWASSER, of Cleveland.—Dr. Ross has spoken about the use of dilatation of the cervix for dysmenorrhea. As in other operations in the office, it is to be condemned for the reason that we cannot make a careful pelvic examination unless we put the patient under an anesthetic, and if an anesthetic is to be given I prefer to do the operation at home rather than at the office. I find in a great many cases after dilatation that the stricture returns from time to time, and you have to dilate again and again, whether you use electricity, sound, or dilator.

DR. L. S. McMURTRY, of Louisville.—I think the principles on which the treatment of dysmenorrhea and displacements of the uterus by dilatation of the cervix is based, and the treatment of nervous conditions, are altogether faulty. In discussing the subject we seem to lose sight of the analogies that obtain in certain pathological conditions. When it was the fashion to treat dysmenorrhea and stricture a great deal by the use of dilators, when the dilator was as much in fashion as the curette and gauze packing are to-day, we were told that dilatation of the cervix would cure almost everything. Nervous women, women with hystero-epilepsy, were told that they could be cured by dilating the cervix. I see few cases every year where I think there is anything to be accomplished by using the dilator. I very rarely use it. I have used the stem pessary, and I quite agree with Dr. Ross that it is a harmful instrument.

DR. WILLIAM W. POTTER, of Buffalo.—While I am prepared to admit and to agree with the President and some others who have spoken with reference to the fact that the dilator, like so many other instruments used in the interior of the uterine cavity, has done much harm by setting up violent pelvic inflammation which has resulted in matting of the tissues, yet I believe there is a class of cases which are amenable to treatment by the dilator in proper hands. I think that that class of cases was delineated in a measure by Dr. Ross when he referred to hyperesthesia of the lower segment of the uterine mucosa, where we understand the internal os uteri to be located. It is not a stricture, but it has been sometimes so termed, and the word has led to much controversy. I do not believe that it is analogous to stricturous tissue elsewhere. I believe the word "hyperesthesia," or an excessive sensibility of that region, is the correct term. The nerve ends are overcharged with sensitive elements. I have demonstrated over and over again clinically that moderate dilatation of the cervix for dysmenorrhea in neurotic women, described as badly nourished, and yet not quite reduced to the extreme condition which the picture the essayist drew would indicate, is followed by improvement, and finally the dysmenorrhea disappears.

DR. GEORGE F. HULBERT, of St. Louis.—The conception that dysmenorrhea is due to a stricture is responsible for the methods of treatment that we have had advocated to some extent in Dr. Pond's paper, and which are largely practised to-day by a great many gynecologists. I am satisfied, from investigations in the dead-house extending over a period of ten years, in which I had an opportunity of examining

over one thousand uteri, that the condition of stenosis of the uterine canal in the lower segment is one of the rarest conditions that ever occur in that organ. In 1890, at a meeting of the Mississippi Valley Medical Association, I presented a paper on "Mechanical Obstruction," in which I dealt with this idea of stenosis of the cervical canal. Those who have the conception that the disturbance is not a mechanical one, but is a functional one and is resident within the tissue, cannot accept the practices that have been advanced in the past in regard to treating those conditions whose symptomatology is simply that of dysmenorrhea.

I agree with Dr. Pond in regard to the judicious use of the dilator, and that consists in what may be termed physiological exercise of the tissues. At the time the instrument is used, as soon as resistance is appreciated to any great extent we should stop, allow a few moments' rest, then try it again.

DR. X. O. WERDER, of Pittsburg.—There are two factors in the production of dysmenorrhea. One is an infantile or badly developed uterus, and these cases usually begin with dysmenorrhea. At the beginning of puberty they complain of pain at the time of the menstrual period. Then we have another class of cases that are perfectly free from pain for the first three or four years, after which they begin to complain of it at the time of the menstrual period. The first class of cases are benefited by tonic treatment, fresh air, exercise, and the like. In the other class of cases the symptoms do not appear until three or four years after puberty, and we find that it is endometritis that produces dysmenorrhea in them. Frequently these cases are accompanied by stenosis due to swelling of the mucous membrane. In those cases the use of the dilator is good treatment, not so much by stretching the stricture as by producing drainage and relieving the endometritis.

DR. POND (closing the discussion).—I do not wish it to be understood that I resort to the knife in those cases that can be cured by dilatation. An examination should be made first to make sure that there is no serious disease of the uterine appendages; and if after the use of a light dilator we find the dysmenorrhea still continues, and the cervix is of a dense nature, where the muscular fibres are almost cartilaginous, then I think the knife will accomplish more than the dilatation. But in the majority of cases a light instrument will bring about the desired result where the cervix is patulous.

(Continued in next number.)

ITEM OF INTEREST.

The Southern Surgical and Gynæcological Association will hold its next meeting in New Orleans on the 14th, 15th and 16th of November.



FIG. 15.

(See Dickinson's article, page 991.)

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

NOVEMBER, 1893.

HÆMORRHAGES OF PREGNANCY: THEIR
MANAGEMENT.¹

BY JOHN O. POLAK, M. D.

Brooklyn.

Instructor in Clinical Obstetrics in the New York Post-Graduate Medical School and Hospital, and the Long Island College Hospital.

The time allotted for this paper is so limited that I will only speak of the more important hæmorrhages: bleeding as a symptom of miscarriage, placenta prævia, and accidental hæmorrhage from the partial separation of a normally placed placenta, occurring ante-partum. While of those post-partum I will consider hæmorrhages from uterine atonicity, from lacerations in the cervix, vagina and vulva, and finally, secondary uterine hæmorrhage, leaving rupture of the uterus and etopic gestation to the consideration of others of a wider experience.

Hæmorrhage as a sign of miscarriage when very slight may be controlled by rest in bed, the hips elevated, with the initial use of morphia per rectum, followed by 3j doses of the fluid extract of Viburnum or gr. iv pill of the solid extract. Though I admit the value of opium and the bromides in these cases, and their almost universal use, I must urge the efficacy of Viburnum as a uterine sedative.

If time would permit, I should be pleased to report in detail the histories of thirty-two cases of threatened abortion treated by rest,

¹ Read before the Section on Obstetrics of the Pan-American Medical Congress Washington, D. C. September 5th, 1893.

initial suppository of opium, and fluid extract of *Viburnum Prunifolli*, no case resulting in miscarriage. The more severe cases with abortion inevitable, cervical softening, dilatation and the ovum separated, perhaps protruding, everything being aseptic, the cervical and vaginal tampon is to be advocated.

Method.—After emptying bladder and rectum, patient in Sims' position, douche with an antiseptic solution, then through a Sims' speculum, with anterior lip of the cervix fixed, carry strips of iodoform-gauze into the cervical canal through the internal os, making a firm intra-cervical plug; then pack anteriorly, posteriorly, laterally and finally against the cervix, filling the whole vagina with gauze.

The importance of the intra-cervical plug is threefold:

1. It stimulates uterine contractions by its presence.
2. Thus hastens dilatation.
3. Completes the separation of the ovum by causing the blood to accumulate between the womb and foetal membranes.

When the hæmorrhage is profuse, sepsis imminent, or the patient suffering from acute anæmia, thorough evacuation with the aseptic finger or curette is the procedure. If the uterus be septic, irrigate the cavity with one third strength solution of peroxide of hydrogen, and subsequently pack with iodoform-gauze after leaving from thirty to sixty grains of iodoform within the cavity.

There is no difference of opinion as to the necessity of controlling the bleeding in cases of inevitable abortion, and it is generally agreed that the tampon is the method, par excellence, leaving it in position from six to twelve hours. Its removal will be followed by the ovum or foetus in the majority of cases, and the immediate symptoms will subside, yet the uterus may not be completely emptied, especially in the early months, portions of the secundines will certainly be retained, later the placenta. In these cases shall we pursue the expectant plan waiting for subsequent hæmorrhage or ptomaine absorption before interfering, or advise radical interference? Notwithstanding the views of such men as Tarnier and Parvin, I believe better results will be gained, and many deaths from sepsis be averted by the curette, irrigation and drainage with iodoform-gauze; if possible, it is safer to use the aseptic finger than either the sharp or dull curette. Ergot should not be given until the womb has been relieved of its contents.

I want to add to the record of Dührssen who reports one hundred and fifty cases with no deaths attributable to the treatment, twenty-

seven cases during the last two years, with no deaths and perfect recovery; the patients subsequently having neither suffered from hæmorrhage nor endometritis, which are such frequent sequels to improperly managed miscarriages.

Placenta Prævia.—Clinically a placenta is prævia when it has an attachment in the lower zone, and the cervix, from which it is detached during canalization, or as Rigby describes it in his essay more than one hundred years ago: "A prævia is fixed to that part of the womb which always dilates as labor advances." The hæmorrhage is primarily from the ruptured uterine sinuses exposed as the placenta is separated; and secondarily from the placenta itself.

Clinically we may classify the varities as total, lateral and marginal.

The treatment is best considered under three (3) heads:

First, before viability; second, after viability; and third, the management of labor.

Before Viability.—Diagnosis made with the foetus dead, total prævia, or copious hæmorrhage, empty the uterus; none of these conditions being present, wait.

After Viability.—Act with the occurrence of the first hæmorrhage, for not only is it proven by statistics and clinical observation that the mortality in these cases is greatly reduced by induction of premature labor, but it is not right to leave the patient to the chances of a fatal result from hæmorrhage, nor allow her strength to become exhausted by repeated or continued bleedings—not to speak of the nervous strain she sustains. Murphy and Barnes advocate separation of the placenta within reach by insinuating the finger through the os between placenta and uterine wall, and sweeping it about; thus detaching the placenta from the walls of the womb, as high up as the finger can reach, then put in a Barnes' bag and wait; the bleeding will not continue with dilatation if the placenta has been sufficiently separated at first. Proceed in this manner until the os is fully dilated; then decide which is the preferable course to pursue: forceps, version, or to leave it to nature. Murphy "gives ergot freely to start up pains." This I do not believe to be safe practice.

If the cervix be closed, douche, then tampon with iodoform-gauze, taking special care to introduce strips in through the cervical canal. Remove after four or five hours, keeping the patient under close observation, and the cervix in most cases will admit one or two fingers. There is now ample dilatation to perform version by the Braxton-Hicks method; bring down a foot, which acts as a most efficient tampon and

by drawing it through the os perfect control of the hæmorrhage may be had. Then leave to nature as far as possible. Let me urge in this connection, separating in all cases when possible the two operations of version and extraction.

The advantages of podalic version by the Braxton-Hicks method—first, it is possible to turn when the os will only admit one finger; second, by early rupture of the membranes further separation of placenta is prevented; and third, the breech acts as an aseptic natural tampon controlling hæmorrhages.

In my last two cases, considering the foetal mortality, and the mothers desiring to bear living children, hæmorrhage occurring at the end of eighth month I resorted to bi-polar version, Dührssen's incisions in the cervix extraction, manual delivery of placenta, and the intra-uterine tamponade, with good success. It must be borne in mind, when the incisions are used, that the portio-vaginalis must be effaced, and we should be prepared to repair the cervix at once to control hæmorrhage if necessary. When labor occurs spontaneously, tampon to control hæmorrhage and promote dilatation, turn and extract; forceps may be used if the head is engaged.

Digital dilatation, podalic version and extraction have proved successful in the hands of many. The incisions are quicker if the cervix be effaced. In total prævia, as recommended by Wigand, Zweifel suggests, to avoid perforating the placenta, that the fingers be carried over the edge anteriorly, thus reducing foetal mortality, though less hæmorrhage is caused by perforation. In head presentations, prævia lateral or marginal, pains good, strong, and regular, there being no disproportion between the head and pelvis, rupture the membranes, apply a binder and wait; deliver by nature or forceps.

Accidental hæmorrhage from partial separation of a normally placed placenta.

Varieties: concealed and apparent.

Management. If the os uteri be sufficiently dilated to admit of delivery either with forceps or podalic version, one or the other is to be employed. If undilated, digital dilation, the Barnes' bag, or if the portio-vaginalis be effaced, the bloody method must be employed; then rupture the membranes, and deliver by either forceps or version. Remove the placenta immediately and tampon the uterus with iodo-form-gauze to prevent further hæmorrhage. To combat the acute anæmia in these cases lower the head; give stimulants hypodermically and a saline infusion between the scapulæ. Craniotomy may be

resorted to if the fœtus be dead or non-viable. I wish to condemn ergot in these cases before delivery as giving rise to a spasmodic condition of the uterus, and constriction of the lower segment.

Post-partum hæmorrhage from uterine atonicity. There have been innumerable suggestions as to the management of this accident, yet I will simply outline the methods which have been of most service to me, mentioning them in their order of application.

1. Proper management of the third stage, waiting a full half hour before delivering if there be no hæmorrhage; grasp the fundus and keep up continuous friction until retraction is firm. If bleeding occurs express the placenta at once, or remove it manually. After expressing the placenta, squeeze out the clots and press the fundus well into the iliac fossa. A full bladder after labor has caused hæmorrhage from atonicity in my experience.

2. Ergot hypodermatically deep into the tissues. Preferably the posterior aspect of the thigh.

3. Hot douch with the hand in the uterus the fingers raking down the walls.

4. The intra-uterine tamponade, which acts as an irritant stimulating contraction and by so doing plugs the open sinuses.

Cervical hæmorrhage from laceration may be controlled by the aseptic suture, or the uterine and vaginal tampon, taking care to plug the lacerations.

Suture-ligatures will control tears in the vagina and perineum. Combat the acute anæmia consequent upon flooding by lowering the head, stimulants, as ether, whiskey, ammonia, etc., hypodermically, auto-transfusion and subcutaneous injections into the loose cellular tissues, and rectal enemata of .6 salt solution at 100° F.

Formula of normal saline solution:

℞	Soda Carb.	-	-	-	-	gr. XV.
	Sodii chlor.	-	-	-	-	3iss.
	Aquæ	-	-	-	-	oii.

In conclusion let me very briefly call your attention to secondary hæmorrhage occurring one or more days after labor.

Mainly due to following causes: Retention of fragments of placenta, membranes, a placenta succenturiata, blood clots especially in multiparæ and full bladder.

Treatment: Empty the uterus with the fingers of blood clots, shreds, etc., douche, tampon and give ergot.

HABITS OF POSTURE A CAUSE OF DEFORMITY AND DISPLACEMENT OF THE UTERUS.¹

BY ELIZA M. MOSHER, M. D.

Brooklyn, N. Y.

The influence of habits of posture upon the shape of the chest, and the healthful development of the lungs, has long been understood. Their influence in the production of spinal curvatures is well known. It has long been a common practice to elevate an inflamed part, and otherwise limit or utilize the force of gravitation in the treatment of medical and surgical cases.

Before the time of Marion Sims, the gynecologist and obstetrician had learned the usefulness of certain postures in the treatment of pelvic conditions. In the light of all this knowledge it seems strange that so little should be known to-day in reference to the influence of habits of posture in the *production* and *maintenance* of deformities and displacements of the uterus, an organ so movable, and in itself so helpless to resist the forces of gravitation and pressure from surrounding structures.

The human body viewed from the standpoint of its mechanics, consists of a central arch, or pedestal,—the pelvis, which supports a perpendicular superstructure, the trunk. Because the pedestal is subject to movement upon its axis, the superstructure to maintain an equilibrium must be flexible, and this flexibility is attained by the spinal column made up of many segments, by ribs articulating with it, by flexible costal cartilages and by soft abdominal walls.

The trunk supports three weights which are attached to its summit, viz:—the arms and head. Upon the position of the pelvis below, and the adjustment of these elevated weights, the shape of the spinal column in health mainly depends.

The pelvis rests upon its ischia, or upon its column-like supports, the legs, at an angle more or less oblique, in which position it has the power to rock backward and forward, and from side to side.

The absence of bony land marks, posterior and anterior, upon the same plane of the pelvis, makes it difficult to measure its actual angle

¹ Read before the Gynecological Section of the Pan-American Congress, Washington, D. C., September 8th, 1893.

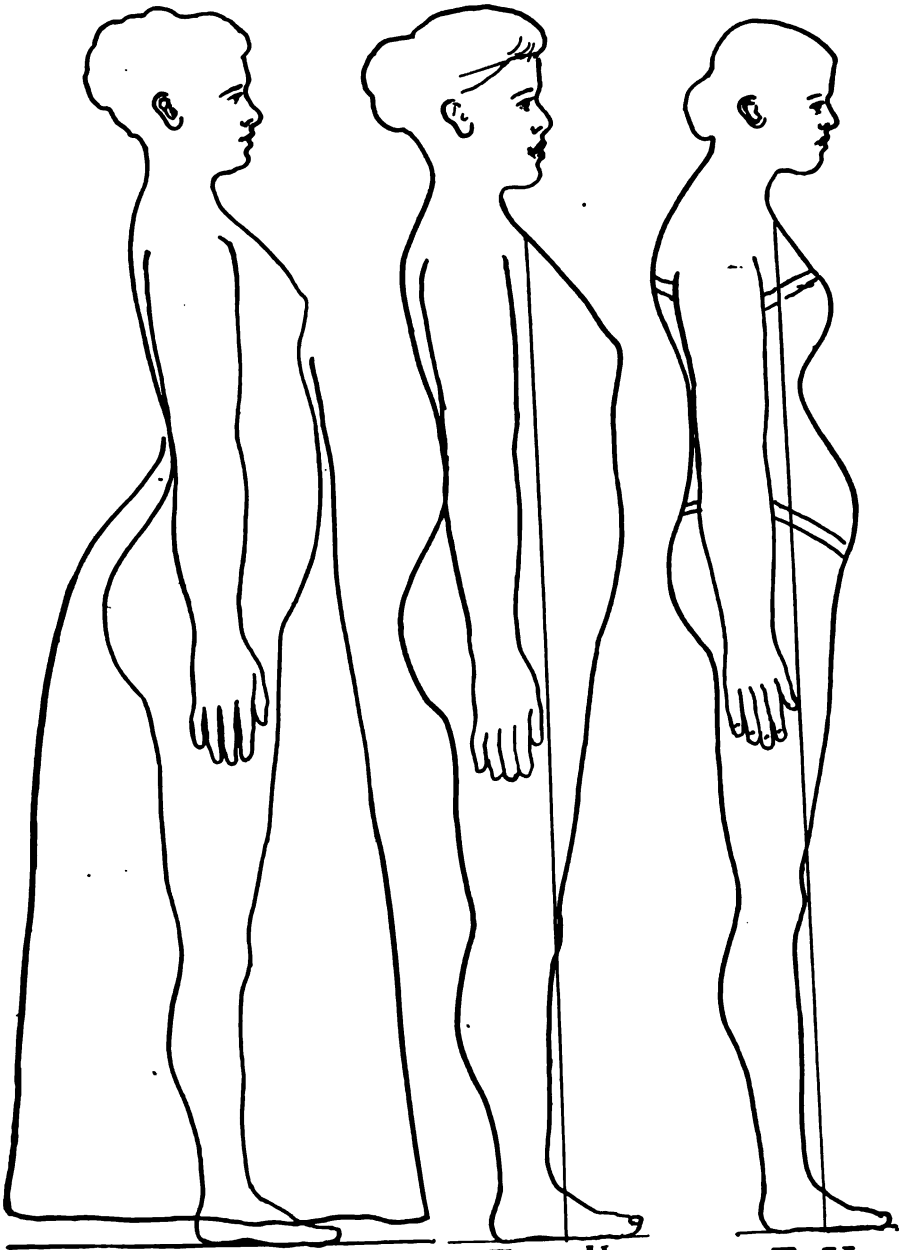


FIG. I.

FIG. II.

FIG. V.

of anterior inclination. The prominence of the spinous process of the last lumbar vertebra, and the upper border of the symphysis pubis, are points which have been chosen by a good many from which to make measurements. Others, myself among the number, have preferred to measure from the sacro-vertebral articulation, a point readily found by placing a rule with sliding bar firmly across the crests of the ilia, and measuring downward an inch; the depression which indicates its location is found very near this point, especially if the individual to be measured bends backward or forward. The angle with the vertical, formed by measuring from these points, has been termed the "Angle of Obliquity of the Pelvis." Movement upon its axis laterally, may equally well be called "Lateral Obliquity of the pelvis," adding for the sake of distinction, the words "right" and "left."

The normal position of the pelvis with the body in equilibrium in the upright, is, without doubt, such a degree of obliquity as is necessary to place *the weight of the abdominal viscera upon the bony arch of the symphysis pubis, and the lower anterior portion of the abdominal wall.* In this position when there is no lateral inclination, the pelvis supports the spinal column and all the structures connected with it, not only in symmetrical position, but so placed that a minimum amount of muscular force only is required, to maintain them in equilibrium. (See Figs. 1 and 2.¹)

Within the pelvis, the uterus poises obliquely upon the summit of the vagina, where it is steadied by its lateral ligaments; these by their broad insertion into the middle of its body, and their firm mooring to the bony wall of the pelvis, are well calculated to maintain it in this its most permanent position. Loops of intestine dangle around its fundus, but with the pelvis at a normal angle, they do not act as weights upon it. A full rectum or bladder rocks it forward or backward temporarily; muscular movements and readjustments of the upper weights, so change the shape of the trunk as to cause this loosely placed organ to make more or less wide excursions, from which, however, if it be in a healthy condition, gravitation brings it back, *provided the pelvis retains, or regains its normal inclination.*

What figures represent this normal angle of obliquity? In looking up the literature of the subject, I find that John George Roederer in 1751, called attention first to this subject, but his measurements are not recorded. From his time to the present, more than fifty observers

¹ The outline drawings accompanying this paper are modified from Kellogg's "Outline Studies of the Human Body."

have measured this angle, and have given averages which range from 20° to 75° . Some mention the points from which measurements were made, others do not. As the angle varies with the point of elevation from which it is measured, these statistics are of little value to us in this study of the subject. Schröter (*Geburtshulfe*, Bonn 1888) quotes Herman Meyer as saying, "The inclination of the pelvis varies very much in the *same* individual in the standing position, depending especially upon the degree of abduction and rotation of the thighs." That much depends upon the position of the legs in standing. is proved by the fact that a variation of 20° can easily be made in the inclination of the pelvis by most women, by first placing the legs firmly in *extension* (with the calf muscles strongly in action) and then relaxing until the knees become slightly bent beneath the trunk.

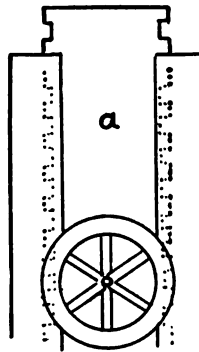


FIG. A.

In order to obtain measurements of the pelvic obliquity in healthy women, and in those suffering from uterine disease, for purposes of comparison, it was necessary to invent an instrument, as I knew of none in this country. The one which I have used for the statistics which accompany this paper, was devised by Dr. Fred Baker, of California, and myself. As is often the case, the first one made proved unwieldly, although its markings were practically correct. For assistance in planning the more perfect instrument which I shall describe, I am indebted to Dr. R. L. Dickinson and Dr. B. B. Mosher, of Brooklyn. For its careful construction, to Mr. Julius Pfarre, of Messrs. Tieman & Co., New York. I have taken the liberty of naming it a "Pelvic-Obliqui-meter." It consists of a grooved upright standard, attached to a solid horizontal platform. Upon the latter the

person to be measured stands. A sliding bar within the upright standard (Fig. A) permits adjustment to the height of different individuals. Two caliper-like arms are attached to the sliding bar, the posterior of which, Fig. B, b, is stationary, (for application to the sacro lumbar articulation). The anterior, Fig. B, c, is provided with a slot, which not only allows lengthening and shortening of the arm, but also permits vertical movement, around its pivot. An index needle projects from the posterior extremity of the anterior arm, which moves over a graduated arc, d, e, placed behind it. As the arm drops to the level of the symphysis pubis, the angle of displacement may be read in degrees on the arc.

With my first instrument I measured the obliquity of the pelvis in forty women, between the ages of sixteen and seventy years, using as

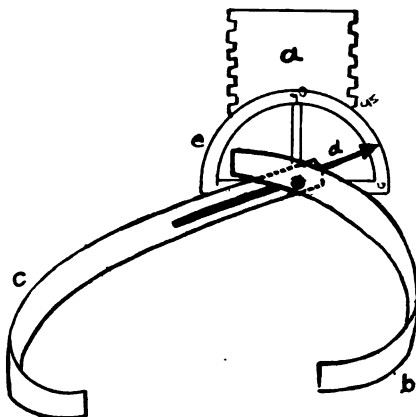


FIG. B.

landmarks the sacro-lumbar articulation and the upper border of the pubic symphysis. Of this number eighteen gave no history of pelvic disease, functional or organic. The remainder had suffered from some form of pelvic disturbance from two to twenty years.

Those of the first class stood habitually with knees firm and chest elevated—practically the military position. Their pelvic obliquity in standing varied from 37° to 48° (see tables appended). Their sitting posture was observed to be equally upright, although it was not measured. Of the remaining number, fifteen had retrocession and retroversion uteri, while six had anteversion or ante flexion.

Those suffering from retroversion with its attendant limitations, with but one exception, held the pelvis at an inclination varying from

25° to 30° only, and rolled it still farther back in sitting. They stood habitually with knees bent, and had poorly developed calf muscles. In searching their history to find if this habit of posture was acquired as a *result* of pelvic discomfort, or otherwise, it was found in a number of instances that the patient was able to recall having been criticised in early life for projecting the abdomen forward. One who had suffered upward of twenty years (during six of which she had worn a pessary), said 'she "had been ridiculed by her family all her life



FIG. 3.

Showing that Pubic Symphysis is in Front of Sternum. (Bernard Roth, M. D.).

because she had poked out her stomach." It would seem, therefore, that the condition was the *result*, rather than the cause, of this habit of posture.

Six women had anteversion or antelexion uteri. In these cases the pelvic obliquity ranged from 29° to 33°.

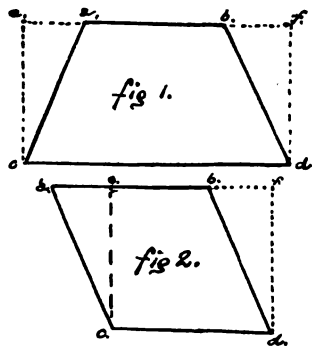
A digital examination made per vaginam with the patient standing in her habitual position, discovered exaggerated intra-pelvic pressure,

in all cases where the pelvic inclination was less than 33° . This pressure increased as the angle lessened. If one of these patients was placed for a few moments in the *modified* "knee-chest position," (*i. e.*, with abdomen well supported) to drag the intestinal loops out of the pelvic cavity, and re-examined with the pelvis at 38° inclination, the intra-pelvic pressure was not observed. It returned slowly, however, when the habitual angle was again regained.

Let us for a moment consider the mechanical changes which accompany an abnormal lessening of the angle of obliquity of the pelvis.

The spinal column loses a portion of its anterior lumbar curve, which makes room for the abdominal viscera to drop backward in this region. The symphysis pubis rotates outward and upward, taking a position upon a plane with or in *front* of the summit of the sternum. (See Figs. 3, 4 and 5.) This movement lessens the distance between the origin and insertion of the rectus abdominis muscle, thus tending to weaken its power to contract; at the same time the inclination of the abdominal wall is so changed, that intra-abdominal pressure takes a direction downward and backward, instead of downward and forward.¹ The result of this movement is to push the contents of the abdomen into the upturned inlet of the pelvis, instead of in front of it, upon the firm bridge of pubic bones made for its support.

When we think of sixteen or eighteen feet of small intestine, more often than otherwise weighted with the products of an imperfect digestion, and distended by gas, swinging upon a relaxed and lengthened mesentery, and crowded into the pelvis not only by gravitation but by



¹ Moreover, that lessened obliquity of the pelvis *in itself* produces actual increase of pressure can be demonstrated by a law of hydrostatics, *i. e.*, the pressure upon the floor of a vessel containing fluid depends on the area of that floor and the depth of the liquid. In Fig. 1, let a b be the waist line, narrowed by tight bands, or corset steels,

abdominal and corset pressure, we easily recognize the cause of the increase of intra-pelvic pressure observed in the cases described.

But what about the uterus itself, in a pelvis held at an angle of 25° ? The force of gravitation strikes its fundus at a point posterior to that which is normal, swinging its weight backward and downward, thus changing the relation of its summit to the vagina, just as we have seen the relation of the abdominal viscera to the inlet of the pelvis changed.

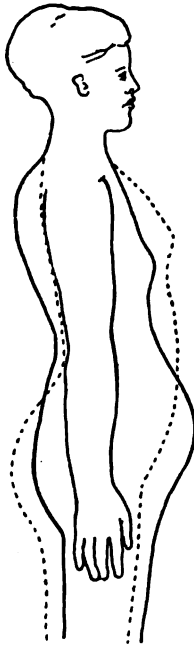


FIG. IV.

c d the abdomino-lumbar line, lengthened by the approach of the pelvis to the horizontal. The contents of the abdominal cavity thus form a cone a b c d. But, by hydrostatics, the pressure on the floor of this cone is equal to the pressure on the floor of a cylinder e f c d of the same height and altitude as the cone.

With a normal waist line and the pelvis held in normal obliquity, the altered conditions may be illustrated by Fig. 2, the lettering on which corresponds to that on Fig. 1. The amount of pressure in this cone is equal to that on the base of the cylinder e f c d. It is easily seen that the base line being shortened by the increased obliquity of the pelvis, the cylinder is smaller in Fig. 2 than in Fig. 1, and the pressure of the mass a c e no longer falls on c d.

This backward movement or retrocession may be the only change in the position of the uterus caused by lessened obliquity of its bony case. It is liable sooner or later, however, to move still farther from its normal place, or to become moulded into new shape by pressure from above. Temporary increase in its weight (after childbirth), relaxation of its supports due to general anæmia or an acute illness, and many other causes favor such a change. The shape and position which it shall assume, depends upon the angle at which the superimposed weight impinges upon it and the direction in which gravitation draws it.

The school girl at her books, rocks the pelvis backward, reducing its angle of inclination to 23° , and then encroaches still more upon the space for the abdominal viscera, by dropping the weight of arms and head forward; at this age normal invagination of the uterus may not yet have become complete, hence the cervix, closely fastened to the pubis, moves upward and forward with it, while retrocession of the body occurs. Can it be otherwise than that pressure from above will mould the fundus into the shape which we so often recognize later, as forward, backward or lateral flexions?

The shop girl stands in this position all day. The seamstress sits in it. The housekeeper alternates standing with sitting. In all, the increase of weight in the uterus during menstruation exaggerates the strain.

Retroversion uteri seems to be the more common lesion, produced by this habit in the adult, especially when the obliquity of the pelvis is lessened to 25° , or even to 29° . When it measures 30° or 33° *anterior* positions of the fundus, seem to obtain in the few cases I have studied.

What are the causes we ask ourselves, which tend to produce the habit of rolling the pelvis backward. Out of ten girls, under sixteen, measured by me, six had well developed calves, showing that they had stood habitually with knees firm, and walked with energy. Each of these girls held the pelvis at an angle above 33° . The remainder had soft, small calf muscles, and evidently stood with bent knees, and walked with leg muscles weakly active. Nearly all of the latter number carried the pelvis at 33° or below. Bent knees in standing mean relaxation of the muscles which hold the pelvis at its normal angle of obliquity. Hence I place as one underlying cause, a lack of training in childhood into right habits of posture in standing.

Articles of dress, which by their weight and in other ways fatigue the legs, favor relaxation of muscles. High-heeled shoes (i.e. over half

an inch) make it impossible to stand with knees firm; hence their influence in lessening pelvic obliquity. The corset steel, as it bends, makes pressure upon the soft abdominal wall in the region of the waist line; approximation of the anterior body line to the posterior moves backward the centre of gravitation proportionately, and in this central region of the upright column, it especially tends to unbalance the body; the latter, however, regains its equilibrium by throwing the pubis upward and outward and the weights attached to the upper region of the trunk forward and downward. The posture is a familiar one and is well shown in Fig. V.

The seats provided for children and adults, from the infant rocker and the school room chair to that of the lecture hall and church, are all responsible in a large measure for this habit of sitting. It is impossible in by far the larger number of such seats, to place the pelvis at the normal angle, and at the same time use the back of the seat to support the shoulders. Luxurious cushions and soft upholstery, tempt the pelvis into positions unknown to our erect grandmothers, whose hard-seated straight-backed chairs, alas! we have tied with ribbons and placed in a corner.

In-door sedentary lives, in over-heated houses and school-rooms, and many similar wrong conditions (which it is the duty of physicians as guardians of the public health to correct), all these produce habits of posture which it would seem have a more potent influence than has generally been recognized, in the production of pelvic diseases in women.

In its normal position the pelvis occupies a horizontal plane, with no lateral angle of obliquity. Sitting upon one ischia, or standing upon one foot produces a lateral inclination, which, if allowed to become habitual, has power to change the shape of the entire body. The scope of this paper permits a study only of the influence of this position upon the organs of the pelvis.¹

With the pelvis in "lateral obliquity" the superimposed trunk retains its equilibrium by throwing its upper weights (arms and head) toward the elevated side. (See Figs. 6 and 7.)² By this movement the

¹ For a further development of this subject see Author's paper on "The Influence of Habits of Posture upon the Symmetry and Health of the Body," Brooklyn Medical Journal, July, 1892, and "Habitual Postures of School Children," Educational Review, N. Y. October, 1892.

² Photographs taken from Dr. Bernard Roth's "Treatment of Lateral Curvature of the Spine."

spinal column is made to take a long lateral curve, with slight rotation upon its vertical axis. The shoulder, hip and ribs approach each other shortening the body line and encroaching upon the space within the abdomen in that region. Opposite conditions obtain upon the side which is unsupported. The contents of the abdomen move downward and toward the latter, carried by gravitation and mechanical pressure. Loops of intestine crowd into the pelvis *upon that side* and against the uterine fundus, prying it out of the place to which



FIG. 6.

Right Lateral Obliquity of Pelvis. (By Bernard Roth, M. D.)

gravitation alone would carry it, and over toward the side where there is least pressure. The broad ligament upon the lower side is stretched and pressed upon, while the other tends to grow short from disuse. The ovaries receive their share of ill-treatment and suffer accordingly.

As these changed conditions become permanent, we should expect the circulation of blood through the organs of reproduction to be interfered with, since all the vessels enter and find exit from the uterus, at its sides in close relation with the insertion of the broad ligaments.

Upon the short side they would become *over* tortuous in their journey to the organ, while upon the other they would straighten out abnormally, because the distance which they are obliged to travel is lengthened. Neither of these conditions is conducive to free movement of the blood current. The obstruction thus presented is exaggerated during the menstrual engorgement, and therefore it would seem that we might count it among the causes of dysmenorrhœa, and especially of that form wherein without evidence of organic disease of



FIG. 7.

Right Lateral Obliquity of the Pelvis. (By Bernard Roth, M. D.)

the ovaries, pain is habitually referred to the lateral regions of the pelvis.

I have examined per vaginam and per rectum, a large number of women and girls, who have acquired a lateral obliquity of the pelvis from habits of posture, and in almost no instances have I found the uterus in the axis of the pelvis.

In the forty-two cases (notes of which I have taken), twenty-two had a *right* lateral obliquity (right hip elevated) while the remainder

had acquired the opposite tilt. In every one of these cases the uterus approached the elevated hip, especially in the upright position of the trunk. Most of these women had dysmenorrhœa and leucorrhœa, and in some the condition was accompanied by more serious pelvic lesions.

A combination of the two forms of obliquity in the habitual posture of the pelvis is quite common especially when the habit has been acquired in standing, and the influence of both can be traced in the shape and position of the uterus.

If we admit that certain habits of posture have the power to increase abnormally intra-pelvic pressure, and predispose women to deformity and displacement of the uterus it becomes our duty, it seems to me, to decide upon the best measures which can be taken to do away with this widespread and far-reaching cause of ill health in women and since prevention is easier and more economic than correction, the work should begin in the home and in the school room.

Mothers in every school district should collectively be instructed in reference to the normal position of the body in standing and sitting, and of the danger which menaces their daughters if not properly trained. Teachers everywhere should be similarly instructed and urged to enforce the adoption of right habits of posture in their pupils. Physical exercise not only in the gymnasium but in the school room, between classes, should be given to strengthen the muscles which hold the pelvis in normal obliquity, and which correct the tendency to lateral obliquity. A physical director (preferably a woman) should be employed by the school board of every city to measure the pelvic obliquity of all of the girls in the public schools, from time to time, so as to place those who require it under special training, which should be continued until a right habit of posture has been acquired.

Physicians and all intelligent people should exert an influence against the use of articles of wearing apparel by girls and women which engender bad habits of posture, most important of these being high heels, the corset steel and tight waist bands.

School and lecture room seats, and chairs in general, should be constructed in such a manner as to aid rather than hinder the body in its efforts to maintain an equilibrium in healthful positions.

It is hardly necessary in the light of the facts here presented, to remind the gynæcologist of the importance of training patients into right habits of posture, before beginning local treatment for disease of the uterus and ovaries. Nor can we wonder at the failures we have

been forced to record in the treatment of flexions, versions, and prolapsus of the uterus, when we remember how we have disregarded this important factor in their causation.

I hope the time is not far distant when a systematic use of the "Pelvic Obliqui-meter," accompanied by corrective exercise during girlhood, will obviate the present necessity for the frequent use of the speculum and the surgeon's knife, for the relief of conditions within the pelvis, which interfere with the health and happiness of so many women.

TABLE OF MEASUREMENTS.

OF

Pelvic Obliquity in Women Who have Never Suffered from Pelvic Disease or Discomfort.

Case No.	Age	Conditions.	Occupations.	Height of Body.	Breadth of Pelvis.	Obliquity of Pelvis.	Remarks.
1	31	M.	Actress.	62.5	12.5	37°	
2	36	S.		62.	10.75	37°	
3	25	S.	Nurse.	64.	11.75	38°	
4	26	S.	Stenog.	69.5	11.75	45°	
5	39	M.	House.	63.75	11.75	42°	
6	36	S.		64.5	11.25	48°	
7	26	S.	Nurse.	66.	11.75	42°	
8	25	S.	M. D.	62.	11.75	39°	
9	24	M.		65.5	12.	42°	
10	24	S.		63.	11.75	40°	
11	24	S.		64.	12.25	37°	
12	70	M.	House.	61.25	11.25	37°	
13	28	M.	Editor.	60.	11.75	38°	
14	20	S.		68.	12.5	35°	Slight anteversion uteri.
15	65	S.		65.	11.75	37°	
16	22	M.	House.	63.	11.	48°	
17	22	S.		67.	12.25	40°	
18	17	S.		65.5	11.75	40°	

TABLE OF MEASUREMENTS
OF
Pelvic Obliquity in Women Suffering From Deformity and Displacement of the Uterus.

Case No.	Age.	Condition.	Occupation.	Height of Body. (in inches)	Breadth of Pelvis. (Trochanters.)	Exaggerated intra-pelvic pressure.	Prolapsus Uteri.	Deformity. Anteflexion.	Deformity. Retroflexion.	Displacement. Retrocession.	Displacement. Retroversion.	Displacement. Anteversion.	Prolapse of one ovary.	Prolapse of both ovaries.	Obliquity of Pelvis in Habitual Posture.	General Remarks.
1	22	S.	Sewing.	64		I				I	I			I	29°	
2	25	S.	Shop.	62		I				I	I				27°	Pain in sacral region since beginning of menstruation.
3	49	M.	House.	61.25		I					I				27°	Examined by Dr. Sims 15 years ago; has been under care of several noted Gynecologists.
4	37	S.	Teacher.	64	10.75					I	I				30°	Small fibroid in posterior wall of uterus.
5	37	S.	"Sister of the Poor."	66.5	13	I				I	I				29°	Discomfort, dragging in sacral region several years. Lifted heavy weight. Pain began immediately.
6	25	S.	Service.	63.75	11.75	I									25°	Pessary 6 years ago.
7	38	S.	Dress Maker.	62		I			I	I	I		I		25°	Many years of pain and discomfort.
8	40	S.	Service.	62	12.5	I				I	I				27°	Pain in sacral region 5 years, especially during menstruation.
9	15	S.		63.5	11.75	I									25°	Leucorrhœa. Dysmenorrhœa. General congestion of pelvic organs.

EXOPHTHALMIC GOITRE ; DEATH ON THE TWENTIETH
DAY AFTER A PORRO OPERATION FOR UTERINE
FIBROMATA.

BY ANNA E. BROOMALL, M. D.,

Philadelphia.

The infrequent association of the different pathological conditions of Graves' Disease and of fibroid degeneration of the uterus, with the physiological condition of pregnancy, gives an obstetrical interest to the following case. The history of my patient is an unusual instance of gestation during the existence of a disease which is characterized by impoverishment of the blood. Like chronic heart diseases, Basedow's Disease in its latter stage of cardiac dilation is a serious complication of pregnancy and of parturition. Though the disease has no directly fatal tendency, yet by exhaustion it renders the system more susceptible to other diseases and impairs the recuperative powers after serious surgical operations.

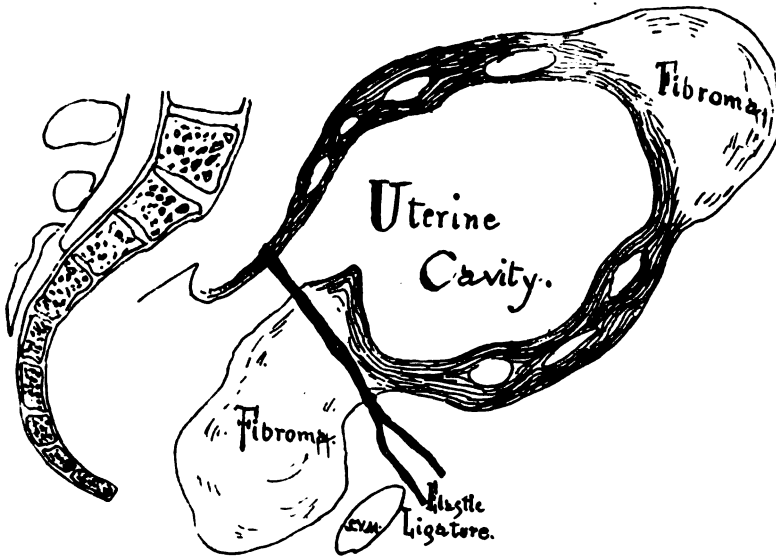
In the early part of December, 1892, M. H., a negro aged thirty, was admitted in the Woman's Hospital of Philadelphia. She was pregnant for the second time, but her admission to the hospital was for that which she described as a general condition of misery. From her imperfect history it was learned that menstruation had become regular after the age of eighteen. The first pregnancy was without complication and the labor was normal with the exception of a post-partum hæmorrhage of moderate severity.

The present suffering began before the second pregnancy which, at the time of admission, had advanced to the end of the sixth month. Though some of the bones presented evidences of rickets, the pelvis had not the characteristics of rhachitis, and her figure was of average height. The distance between the anterior, superior iliac spines was $23\frac{1}{2}$ centimeters, the greatest separation of the iliac crests was 25 centimeters and the conjugata vera was $10\frac{1}{2}$ centimeters. There was great protuberance of the eyeballs, the heart's action was very rapid with accentuation of the sounds and the thyroid gland was enlarged. The most marked general symptoms were insomnia, severe headache and great dyspnœa.

There was no difficulty in making the diagnosis of uterine fibromata nor of the existence of pregnancy. The abdominal enlargement corre-

sponded to the seventh month of pregnancy, the surface of the uterus was very irregular with many small nodules and one large, distinct mass near the fundus. The extremities of the foetus were appreciated readily in the left side of the uterus, and the foetal heart was heard plainly on the right side. The pelvic cavity was found filled with a round, firm body which, having its attachment to the cervix, prevented the appreciation of any portion of the foetus per vaginam.

During the month of December the patient suffered very much from attacks of vomiting, accompanied by dyspnoea and irregular and rapid



Porro Operation for Uterine Fibromata.

action of the heart with an average pulse rate of 140 per minute. In January the condition became very alarming, all symptoms were aggravated and the general suffering was increased by painful uterine contractions. During the development of the lower uterine segment the resistance of the cervical fibroma excited the uterus to painful spasmodic action with the effect of forcing the tumor lower in the pelvic cavity and forming a complete obstruction to the descent of the foetal head. Since the condition of the patient demanded immediate relief and I was forced to abandon all hopes of delivery through the natural passages, I decided upon a Porro operation, which, under the circumstances, was the best operation for the

mother, and would not have been unfavorable for the foetus, had the pregnancy been farther advanced.

After the free administration of stimulants on January 16, 1893, I opened the abdominal cavity, incised the uterus after drawing it out through the abdominal wound and hastily extracted an asphyxiated child, who died at the end of a half hour. The weight of the baby was 1700 grammes and the development corresponded to the thirty-fourth week of gestation. During the extraction of the foetus, uterine hæmorrhage was prevented by manual compression of the cervix, and, after delivery an elastic ligature was substituted for the fingers of the assistant. Later in the adjustment of the *serre-nœud* it was found that the cervical fibroma could not be drawn above the constricting cord and the pedicle was too thick, as is shown in the diagram.

On the one hand, the tumor, if allowed to remain partly constricted by the *serre-nœud*, would expose the patient to infection, and, on the other hand, the danger of hæmorrhage would be very great if the temporary tourniquet were loosened sufficiently for enucleation of the growth. In order to avoid these risks, I slit the peritoneal covering below the elastic cord and, after catching the cut edges of peritoneum, I peeled out the tumor without much difficulty. After enucleation of the growth, the surrounding peritoneum and connective tissue were drawn above the *serre-nœud* and were made part of the stump, which was slender and long enough to be brought out of the lower angle of the abdominal wound; the operation was completed in the ordinary way.

Though the loss of blood was not excessive and the symptoms of shock not greater than usual after such operations, the pulse was 150 per minute and the heart, failing to respond to any tonics, continued its feeble and rapid action. The highest temperature was on the second day after the operation, when it rose to 101.6° , during the rest of the time it remained below 100° . The wound did well, all of the stitches were removed by the end of the second week and a healthy granulating surface was left on the seventeenth day by the detachment of the extra-peritoneal portion of the stump. On the nineteenth day after the operation, the patient became suddenly very restless, complained of severe pain in the epigastrium, the pulse was very rapid and very feeble and death occurred on the following day.

At the autopsy the abdominal wound was found firmly united with slight suppuration around the stump and a few drops of pus in an abdominal stitch sinus. There was no peritonitis and only one slight adhesion of the omentum to the stump. The condition of the kidneys

and of the liver was normal; the heart was large with thin walls, the endocardium was slightly injected, there was no defect of the valves and no heart clot. The portion of the uterus removed at the time of operation contained, in addition to the two large tumors, a number of smaller growths scattered irregularly through the walls. The large fibroma at the fundus was sessile and involved the portion of the wall upon which the placenta was developed, the cervical growth was similar in appearance to the other tumors.

There are some points of similarity between my case and one reported this year by G. Ernest Herman in the June number of the *New York Journal of Gynecology and Obstetrics*. In both patients the descent of the foetal head was obstructed by the presence of a uterine fibroma which, in my case, had its origin in the cervix; in the other case, the tumor, attached at the fundus, had descended into the pelvic cavity with the retroflexed uterus. G. Ernest Herman attributed the death of his patient, which occurred four hours after a Porro operation, to the inclusion of too much tissue within the elastic ligature.

In the February *Archives de Tocologie et de Gynecologie*, 1893, Dr. Fernandez reported an amputation of a gravid uterus with its appendages in a case of uterine fibromata with obstruction to labor caused by the descent of the tumor in advance of the foetal presenting part. Notwithstanding the unfavorable conditions of ruptured membranes, dead foetus from prolapsus of the cord and great exhaustion after twenty hours of labor, the patient recovered.

In my case the fatal result was due to a pre-existing disease and not to the operation, and is not opposed to the fact, fully established by statistics, that in cases of uterine fibromata with delivery of a living foetus through the pelvic canal impossible, the lowest percentage of deaths has been obtained by the Porro operation.

*Abstract of a paper entitled :*CONSERVATIVE SURGERY OF THE UTERINE
APPENDAGES.

BY CHARLES CLIFFORD BARROWS, M. D.

In defining the term "conservative," the author remarked that he meant such surgical operations as were done to preserve the healthy functional life of the ovary so necessary to certain periods of life. The source of the trouble must be removed as well as the products of inflammation, and although the removal of both at the same time might give relief to very distressing symptoms, interference with ovulation and menstruation were serious drawbacks to such a plan.

The writer assisted Doctor Polk in 1886 when he put in practice a plan of treatment by which inflammatory disease of the ovary could be cured without interference with the function of the tube or ovary. This plan with slight modifications and expansions was described by him in a paper by him read before the American Gynæcological Society, in May 1893, and published in the *NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS*, for August 1893. Doctor Polk had first called attention to the subject in the discussion of the paper read by Dr. C. C. Lee before this Society in March 1887. He then said that under the head of "cellulitis" catarrhal salpingitis was cured by routine means and asked why the patient should be denied the chance of cure by breaking up the adhesions, opening the tubes at their fimbriated extremities and cleansing them. Dr. Hadra published an interesting paper in 1885 entitled, "Intra-Peritoneal Adhesions in Relation to Tait's Operation," and advocated the liberation of adherent appendages and their return to the pelvis when these organs were healthy or but slightly changed.

A few weeks after Dr. Polk made these statements he gave the histories of four cases treated in the manner he had suggested and in the fall of the same year added four more cases which he reported before The American Gynæcological Society. This meeting was held immediately after the meeting of The International Medical Congress, at Washington, and was largely attended by physicians from this and foreign countries. One of the foreign guests who took part in the discussion of the proposed innovation must have overlooked

this fact judging from a paper recently read before The American Gynæcological Society and published in the last volume of its Transactions.

The discussions provoked by Dr. Polk's early papers favored but two lines of treatment ; either total extirpation or absolute non-interference.

Dr. Barrows thought we were prepared to admit that as a rule, tubal and ovarian inflammations have their origin in some inflammatory condition of the uterus or its lining membrane and that disease of the appendages and their surrounding and neighboring peritoneum is but an extension of the original pathological condition of the uterus. In recognition of this fact Polk advises that the uterus be thoroughly curetted and packed with gauze. In all of Dr. Barrows' cases this was done before or at the time of coeliotomy, and he has done in addition at the same sitting an operation for laceration of the cervix and perineum and has resected the tubes or ovaries. The time occupied for this combined operation was not more than an hour.

By resection or amputation of the tubes, the author means a cutting off of the diseased abdominal end. The Doctor spoke of the great advantages of Trendelenberg's position which rendered flooding of the peritoneal cavity and the use of the drainage-tube unnecessary, thus avoiding two of the common avenues for the introduction of septic matter. For its popularization in this country we are indebted to Dr. Florian Krug.

Dr. Polk is quoted as saying that conservative surgery may be of use in dealing with simple salpingitis and its accompaniments, smaller ovarian cysts in which some of the normal tissue remains, hydrosalpinx and hematosalpinx. Dr. Barrows thinks that the usefulness of the operation may be extended and that certain cases of pyosalpinx may be successfully treated by amputation of the tube at some distance from the cornua (along lines suggested by Polk in 1887 and in the paper for 1893 above mentioned) and the formation of an artificial *ostium abdominale*. The tubes become heavy after the extension of the inflammation from the uterus, they fall low in the pelvis and in this position they form attachments to other organs and become occluded. Close examination may show that a part of the tube has drained into the uterine cavity and has become healthy, pus in the outer part of the tube becoming encysted. In such cases when the ovary is not diseased I have amputated the tube at the outer end of the healthy portion, washed it out, slit it up a short distance, and inverted its mucous

and serous coats by fine catgut sutures, thus forming an artificial ostium abdominale. The meso-salpinx has been tied so as to bring the tube close to, but not in contact with the ovary. After this the uterus is to be curetted and packed with gauze. Dr. Barrows has operated on three cases and all of their symptoms were relieved. In one case the abdomen was opened one year after the operation and the tube found open and to all appearances healthy. The second operation was for ventral hernia. The writer states that three cases of conception have already been reported as following amputation of the tubes one in the practice of Dr. Polk and one in the practice of Dr. McMonigle. Dr. Barrows presented the histories of eighteen cases among which there was no fatal result. The average age was twenty-five, giving an average of about twenty years of menstrual life. Five were cases of pyosalpinx. These cases did equally well as those of simple catarrhal salpingitis. All the patients were relieved.

A case of gonorrhœal pyosalpinx was narrated, there was an acute attack of gonorrhœa which was treated by douches and application. The uterus was then curetted and packed with gauze. When the abdomen was opened later the tubes and ovaries were found bound down by adhesions. During the operation the pelvis had been elevated by the Trendelenberg position, and sponges packed under the appendages. Pus was seen to flow out of the extremities of the Fallopian tubes although the tubes were normal about an inch from the fimbriated extremity, and were amputated at this point with the formation of an artificial abdominal opening. The pelvic cavity was sponged dry and the abdominal end closed without drainage. The patient made an uneventful recovery and has menstruated since regularly and painlessly.

FURTHER STUDIES OF THE BIMANUAL SIGNS OF EARLY PREGNANCY; THE LONGITUDINAL FURROW OR FOLD AND THE DENSER SPOT IN THE BODY OF THE UTERUS.

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Bimanual examination of the uterus of early pregnancy sometimes detects a longitudinal furrow or fold on the body of the organ.

A well-marked variation in density or resistance is found in the body of the uterus in some cases, as though a small almond were lodged in the cavity at the point where the resistance is felt. This dense spot probably denotes the location of the ovum.

The longitudinal fold or furrow has been found most commonly between five and eight weeks after the beginning of the last menstruation, and the dense spot from the fifth to the fourteenth week.

In pursuing an investigation for which the material is necessarily limited it seems advisable to report progress occasionally in order to request information from other observers,—and with the hope, of course, of staking out a claim.

Seventeen cases with many more examinations are reported, together with three abnormal cases to elucidate them.

My previous study of the signs of early pregnancy did not include these cases, because I had not recorded a sufficient number to warrant inferences being drawn from them. The conclusions of that report, based on thirty-five selected cases and published in the *New York Journal of Gynecology and Obstetrics* for June, 1892, were as follows:

The Bimanual Signs of Early Pregnancy.

1. The presence or absence of pregnancy may be determined in favorable cases by bimanual examination between the second and sixth

week after coitus, or between the third and eighth after the beginning of the last menstruation.

2. *Belying* or bulging of the surface of the body of the uterus is the most constant and valuable sign. It is rarely absent. It may usually be found five and a half weeks after the beginning of the last menstruation, or by the twenty-eighth day after coitus, although often

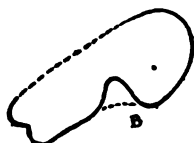


FIG. 1.



FIG. 2.



FIG. 3.

Fig. 1. Well defined anterior bulging, cornicelike in shape, at the twenty-first day from coitus and twenty-eighth from period.

Fig. 2. Belying posteriorly, sixteen days after isolated intercourse.

Fig. 3. Partially contracted pregnant uterus, four weeks after exposure, six after menses. Elastic, resilient body.

present by the sixteenth or twenty-second day. Occurring most frequently on the anterior face, it may appear on both, while in retroversion it is found posteriorly, and in certain cases laterally.



FIG. 4.



FIG. 5.



FIG. 6.

Fig. 4. Partially contracted pregnant uterus, twenty-one days after coitus, thirty-four after menses. Resiliency.

Fig. 5. Relaxation; corpus flat and broad and soft, suggesting superinvolution, but readily made to contract to a shape like Fig. 7. (Six weeks after period.)

Fig. 6. Compressibility of lower, uterine segment and beginning contraction in pregnant uterus four-and-a-half weeks since coitus, six since menses, density being shown by darkness of shading.

3. *Elasticity, resiliency, or softening* of the body of the uterus is more readily detected than the above, but less frequently present. It was found on an average six weeks after the period, or by the thirtieth day after coitus, but occasionally by the sixteenth or twenty-first day. Usually it appears later than belying.

4. *Compressibility* of the lower uterine segment (Hegar's sign) is less often found than the two preceding; when it appears it may be fairly well defined by the twenty-fourth day after intercourse, but it is often indistinct until the thirtieth or fiftieth,—say five to seven weeks after menstruation. It is, therefore, a later sign than the preceding.



FIG. 7.



FIG. 8.

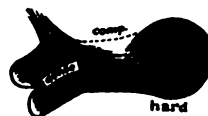


FIG. 9.

Fig. 7. Compressibility (Hegar's sign), in a contracting pregnant uterus, twenty-five days after period, twenty-two after marriage.

Fig. 8. Firmly contracted pregnant uterus, seven weeks after period, six since marriage, Hegar's sign being well defined.

Fig. 9. Contraction in pregnant uterus, five weeks since menses, four since marriage. This uterus was recently retroverted, with extensive adhesions.

5. *A transverse fold* on the uterine wall is at times distinct in the relaxed condition. Although infrequently found, this sign is of high value and may be detected, usually, after the fourth week

FIG. 11.

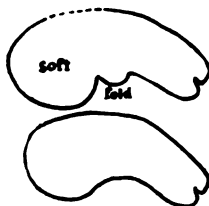


FIG. 12.



FIG. 10.



FIG. 13.

Fig. 10. Broad transverse fold in relaxed uterus twenty-nine days after only intercourse. This condition was well marked in a subsequent pregnancy.

Figs. 11-12. Below, the retroverted imparous uterus. Above, the same five weeks after menses.

Fig. 13. Narrow, but distinct transverse fold near the cervix in the relaxed pregnant uterus, five weeks after menses, four-and-a-half after coitus.

6. One should not depend on a single sign unless it is strongly marked, nor will a single examination always suffice to make a positive diagnosis.¹

¹Softening of the cervix was not studied.

7. *Intermittent contractions* are present throughout pregnancy. Between the second and sixth week after fruitful coitus the uterus will be found in one of three conditions :

a. Relaxation.—The fundus a pointed arch. The corpus soft, compressible. One or more transverse folds or furrows on the anterior surface—in retroversion on the posterior. The whole organ broadened or elongated, or flattened. (Figs. 5, 2, 10, 13).

b. Partial contraction.—(Most common). Corpus distinctly bellied or bulging on one wall or both (usually the anterior). Corpus elastic, resilient. Lower uterine segment compressible. Whole organ shortened. (Figs. 3, 4, 7).

c. Firm contraction.—(Infrequent). Corpus globular. Corpus terse firm, even hard. Compressibility present or absent. Whole organ distinctly shorter than in the two preceding conditions. (Figs. 8, 9).

Method of Examination.

In order to secure a satisfactory examination of the anterior surface of the uterus it is absolutely essential that the bladder be emptied immediately before the patient takes her place on the table, and that the corsets be unhooked and every waist-band loosened. To secure complete relaxation of the abdominal wall the patient's head and shoulders should be elevated, as she lies in the dorsal position, with the pelvis within easy reach of the operator, at the foot of the table.

In searching for the signs with which this paper deals it is wise to do as little preliminary palpation of the uterus as possible,—and particularly of the cervix—since a very few touches will suffice to cause an intermittent contraction, when the uterus will harden and some of the signs may be obscured, or even temporarily disappear. If the uterus can be quickly caught between the two fingers that are passed into the vagina against its anterior wall and the outer hand that is laid on the hypogastrium it is found in the most favorable condition for observing the special signs here studied. Then if we have one of the cases where sensitiveness and tension of the abdominal wall are lacking we shall be able, by pressure with the upper hand, to sweep the uterus from side to side of the pelvis across the fingers in the vagina in such a way that its anterior wall slips past their tips. The stationary fingers in the vagina can detect more delicate signs than the moving fingers can, and, moreover, this method more nearly eliminates the possibility of mistaking the utero-vesical ligaments, or

the foldings of the collapsed bladder, for the prominences on the anterior uterine wall.

Immediately after each examination sketches were made of the conditions found, which is a much more definite method than by written description alone. They were labelled all over, and described. Some of them are here reproduced, and generally one-fourth life size.

The Furrow or Fold.

About the end of the second month, in a certain number of cases of pregnancy, one is able to detect a groove, or sulcus, or shallow furrow, or at times two furrows, running up the anterior face of the body of the uterus, usually to one side of the median line, partially dividing the surface into gently rounded ridges or bellyings. These furrows rarely extend entirely across the surface from top to bottom. They are to be felt most readily in the relaxed condition of the organ, and usually disappear during the contractions. They must be searched for with a moderately light touch, otherwise the compressibility which is characteristic of nearly the whole of the body of the uterus in the relaxed state will prevent us from finding them. (Figs. 18a, 21, 25.)

To account for this condition I can only vaguely theorize. It may be due to an unequal thickness in various parts of the hypertrophied uterine wall, or it may be due to the varying thickness of the decidua, which is very largely developed at this stage of gestation. Such conditions are well shown in the two frozen sagittal sections of women who died in the second month of pregnancy. (Figs. 15, 17.)

When first encountered I imagined that these soft, longitudinal ridges on the anterior face of the uterus (Figs. 28, I; 31, X) might be the utero-vesical ligaments felt through the empty bladder as the uterus lay down upon it, and this seemed probable because the folds were sometimes felt equally on the two sides at the ordinary location of the ligaments. But by the method I have described one can be fairly certain that the bladder walls remain quiescent while the uterus alone is moved across the pulps of the fingers. This I have been able to do very distinctly in two or three cases of women whose anterior abdominal walls were much thinned and thoroughly relaxed by previous pregnancies. In the detailed history of the cases still stronger proof is furnished that such a deception did not occur. Moreover, the supposition that these folds are the utero-vesical ligaments, or folds of the walls of the empty bladder, is rendered negative by the cases wherein the pelvis was sufficiently empty and the uterus sufficiently movable to permit the fundus to be

displaced far to the side of the pelvis, when the signs persisted in the same spot on the uterine wall. Finally, when the uterus of this period of pregnancy is retroverted, the utero-sacral ligaments can be felt flat against the posterior surface of its body, and yet they do not suggest the signs I am describing.

Distribution	{	2—5 weeks . . .	2 times found
		5—8½ “ . . .	16 “
		9—14 “ . . .	7 “

The Denser Spot.

If one could imagine an almond slipped into the cavity of the uterus during the second month and passed up near one of the horns of the uterus and lodged there, the organ would impart to the finger somewhat of the feeling that it does in a certain number of cases of pregnancy that have come under observation. (Figs. 24, 25.) Usually, in the relaxed condition, the body of the uterus is so soft, or doughy, or boggy, or flabby that on the more accessible anterior surface, at least, the finger can be distinctly pitted into the tissue, especially in the median line, as Dr. Charles Jewett states, when he says compressibility is most marked there. But in some cases, and particularly in those cases in which the furrow or furrows are found, resistance at some point arrests the attention. I have found it in a very clean cut and unmistakable way in nine instances. I have been able to detect it in subsequent examination of the same patient at the same spot in four cases, and I therefore feel warranted in drawing attention to it, and asking for observations to confirm or explain its presence. As to its frequency I can make no statement, since it is only within the last year that I have been searching for it in all early pregnancies, and inasmuch as it can be found only in patients in whom the conditions permit a thorough bi-manual examination, and not in all such patients.

In the cases in which this sign was detected it was found at 5½, 5½, 5½, 7, 7, 8, 8½, 9, 12, 13, 13½, 14 and 14 weeks. It was not detected at 2, 3½, 6, 6, 6½ and 9½ weeks, where it appeared later;—and it disappeared at 8½, 16 and 23 weeks in cases in which it had been present.

The wide range over which a certain sign spreads itself is accounted for by the long life of the ovum and of the spermatozoon, and by the uncertainty of the date of their embrace, and by the fact that the ovum of the first omitted period is often the one fertilised

instead of that of the last period. The embryologists, indeed, as is well known, date their ova from the omitted period,—whence comes much confusion.

One is tempted to believe that the *dense spot represents the location of the ovum in the cavity*, and that the compressibility of the rest of the body is explained by the spongy softness of the thickened decidua. But the evidence is meagre, resting on two cases verified by examining the interior of the uterus after miscarriage, and has not been tested by the writer by the examination of any fresh specimens post-mortem. Charpentier speaks (page 172) as if it were usual in his post-mortems



FIG. 15.

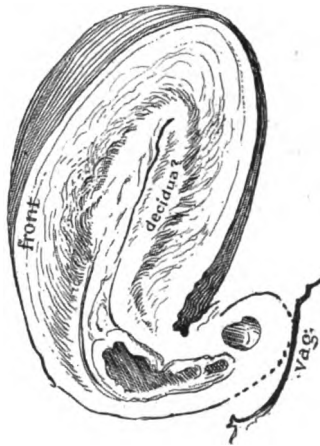


FIG. 16.

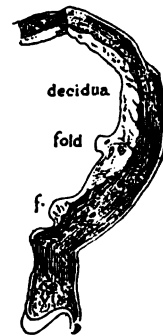


FIG. 17.

Fig. 15. Uterus of eighth week. The soft, spongy decidua, D, D, is presumed to be very compressible through the relaxed and vascular uterine walls, whereas the ovum with its sac of fluid should give a sense of resistance. Sagittal frozen section of primipara, ($\frac{1}{2}$) (Braun). (See *Frontispiece*.)

Fig. 16. Thickness of the decidua, compared with that of the muscular wall, in a uterus two months pregnant, the foetus having been removed. Hart ($\frac{3}{4}$).

Fig. 17. The thickened decidua of two months, in a retroflexed uterus. The section passes to one side of the median line. (Hart, frozen, $\frac{1}{2}$).

Fig. 18. Decidua and uterine wall (Coste.) Showing furrows and thickness of decidua. ($\frac{1}{4}$).

to find in the uterus of five or six weeks an entirely free space, the ovum occupying but a portion of the cavity. (See Figs. 15, 16, and 19.) Minot says that about the sixth week the mucosa lining the uterus is enormously hypertrophied and thickened, and contains many dilated

irregular blood sinuses, which reach their maximum development at the end of the second month; and that this decidua is spongy, or pulpy, soft, and very moist. The growth begins by a thickening of the mucosa within the area of the uterine wall to which the ovum is attached, so that during the third and perhaps fourth week this area (serotina) is the thickest portion of the decidua; but the vera and reflexa also thicken, the former much the most, and soon outdo the serotina. By the end of the fifth week the reflexa measures 2 mm. ($\frac{3}{16}$ inch) and the vera fully 1 cm. ($\frac{3}{8}$ inch). The serotina measures 3 mm. ($\frac{1}{8}$ inch). The decidua vera is nearly or quite as thick as the vascular and hypertrophied uterine wall at five weeks (Thompson), at three and six

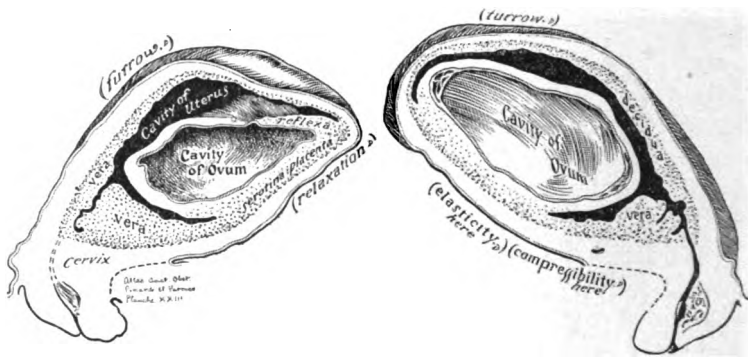


FIG. 18a.

Fig. 18a. Frozen section of uterus at two and a half months (Pinard), showing relaxed and thin walls, thickened decidua and the hollow or groove along top of uterus. This uterus would easily yield some of the signs detailed in this paper.

weeks (Coste), and at eight weeks (Braun). Charpentier, in describing the findings in his cases from the third to the seventh week, emphasises the numerous wrinkles and folds at several points presented by the thick soft membrane. One mild instance is here given from Coste. Fig. 19 also shows these puckerings.

Whatever doubt one may have as to whether these changes are frequently palpable—or ever palpable—it will be conceded, I think, that the uterus of Fig. 15 and that of Fig. 19 would give different sensations to the examining finger, provided they could be caught fairly and easily between outer and inner hand. The pulpy decidua should seem less resisting than the sac more or less tense with fluid,—or nearly filled by the foetus, as it is in some part of the early weeks. This difference was detected in Case 19. There the right half of the

uterine body was found to be dense, while the left side remained soft, even after manipulation. When the patient miscarried, curetting with the finger showed that the placenta was located on the right wall, and it is to be supposed that where the placenta developed (beginning usually about the sixth week) there the ovum has been most closely attached.

If density is a constant indication of the position of the ovum it may be due to a localized muscular contraction. Such an intermittent contraction rapidly developed on palpation at such as pot in Case XVIII. Its cause may lie in increased irritability from the presence of the

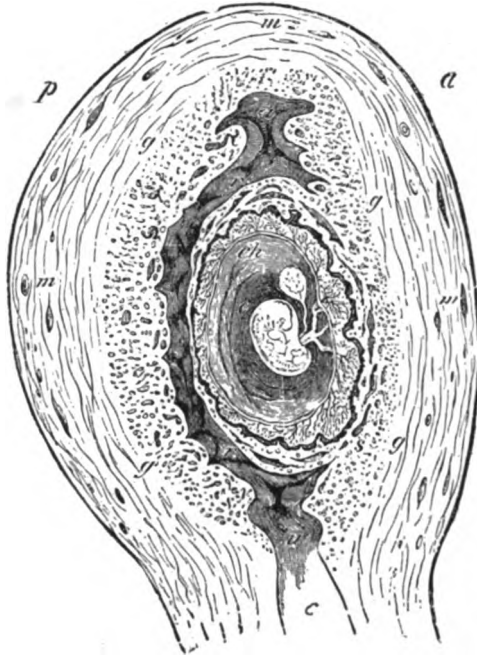


FIG. 19.

Fig. 19. Uterus and ovum of five weeks showing thickened decidua (dele) (Thompson) (enlarged).

ovum. This would account for the discrepancy between my supposition that the ovum is located at the thinner but denser part of the body of the uterus, and the findings in Reichert's case. His is the youngest known human ovum, and is said to be from a seventh week pregnancy, but he found in that cadaver that the organ was a half inch (1.3 cm.) thicker on the side where the ovum lay. His uterus was relaxed, however.

A possible explanation of the seeming *division of the uterus into two chambers* during the early months of pregnancy may be found in the form of the organ pictured and described in the three cases of cordiform or bi-fundal uteri last reported (Figs. 29-31). In these the difference between the half of the uterus that possibly contained the major portion of the ovum, and is proven in one case to have contained the placental tissue, explains how one part of the uterine wall may become hypertrophied and more resistant to the touch or become full and tense during contraction. It is possible, therefore, that the tendency to this malformation in a very slight degree, but sufficient to give rise to the signs we are describing, may be present in a larger proportion of uteri than we have heretofore imagined. This would seem not unlikely, in view of the way in which the uterus develops from the two ducts of Müller.



FIG. 20.

Fig 20. Placental site in cornu, with exceedingly thin wall, after labor, as found in curetting with the fingers.

Other cases may furnish us an explanation. One instance is that of a multipara whose bleeding uterus I curetted with the fingers after labor at term. The placenta was retained and was found located in the left horn of the uterus. Under the anæsthetic I was able to palpate the uterus very carefully in my search over every portion of the wall to find loose tissue. The diagram (Fig. 20), represents the firmly contracted organ, and it will be noted that although the wall of the body of the uterus is of nearly equal thickness about most of the cavity, at the left cornu the uterine wall is almost as thin as paper. Such inequality in the thickness of the uterine muscle might be imagined to exist in the early months of pregnancy, and give us differing degrees of density or resistance at different parts of the body of the uterus. Two

cases of possible asymmetrical uteri may also bear on the matter, (Case XV, Fig. 28).

CASE I. (G. 3. 184). Twenty-seven. Three children. First examination, three and one-half weeks since menses; fruitful intercourse probably preceding the flow; bulging of anterior wall marked, fundus firm, compressibility distinct, slight depression in the centre of the body.

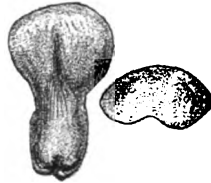


FIG. 21.

Fig. 21. A central furrow without dense spot, in a relaxed uterus.

Second examination, four and one-half weeks since menses; intermittent contractions very marked; the body can be found as a broad, soft, flabby, long mass through any part of which one can almost feel the finger tips, and running up the middle of it, on the anterior face, under very gentle manipulation, a broad and shallow groove can be clearly felt (Fig. 21); whereas on further palpation the body becomes

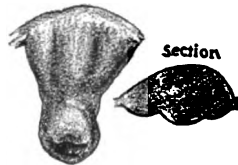


FIG. 22.

Fig. 22. A double furrow nearly symmetrical.

a solid globular mass with a narrow isthmus joining it to the cervix, and the anterior longitudinal groove disappears. Miscarriage one month later.

CASE II. (G. 3. 204.) Third pregnancy; uterus in normal position and somewhat anteflexed; examination fairly easy. Six and one-half weeks since menstruation, four weeks since husband's return, slight bulging of the anterior wall, soft body, becoming slightly elastic, isthmus partly compressible, no transverse fold; on the anterior surface are two furrows running from cervix to fundus and dividing the

anterior face into three nearly equal parts; (Fig. 22) no note is made as to whether any of these parts are dense. Delivered. (G. 3. 233.) A patient with a double longitudinal furrow who had later a somewhat profuse and delayed menstruation; the case is not sufficiently clear as to the certainty of pregnancy to warrant reporting, or counting.

CASE III. (G. 2. 122.) Act. twenty-one; second pregnancy unwell seven weeks ago; intercourse five weeks ago, about which she is very positive; nausea a few days; uterus slightly enlarged, with a compressible isthmus; relaxed and softened body and no longitudinal fold or furrow.

Second examination, four days later: body soft, with a distinct furrow to the left of the median line; no increase of density. Delivered later.

CASE IV. (O. 1. 228.) Second or third pregnancy: nephritis, albuminuria; abortion induced; curetted; from the result it was

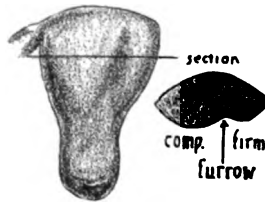


FIG. 14.

Fig. 14. A furrow with resistance at one spot. No other bimanual signs are clearly present in this case, so that a diagnosis would have to be made on these if well marked.

estimated that the patient was about five weeks pregnant; marked antelexion was found before operation, with slight bulging and a little elasticity of the body of the uterus and one ridge on the anterior face to the right.

CASE V. (G. 4. 81.) Thirty-six. One child ten years ago; unwell seven weeks previous to examination; uterus in normal position; examination not very easily made owing to tenderness and thick abdominal wall; hard body, moderate compressibility and a little projection or bulging of the body of the uterus anteriorly. To the left of the median line a short, shallow ditch is detected, and this groove is the boundary between the more resisting portion to the left of it and the larger, softer main portion of the body of the uterus to its right. (Fig. 14.) Not yet delivered.

CASE VI. (G. 3. 85.) Thirty-six Second pregnancy; seven weeks since menstruation, uterus markedly retroverted, posterior bellying, soft body, compressible isthmus, oval pit or ditch in the center of the posterior surface of the body into which the finger tip sinks; uterus replaced and pregnancy went on to term.

CASE VII. (G. 3. 68.) Twenty-seven. Second pregnancy; first examination six weeks after menses, five and one-half after the most probable date of fruitful intercourse; uterus markedly retroverted, with a transverse fold sharply defined on its posterior surface; the organ replaced during the examination. The signs then found very distinctly

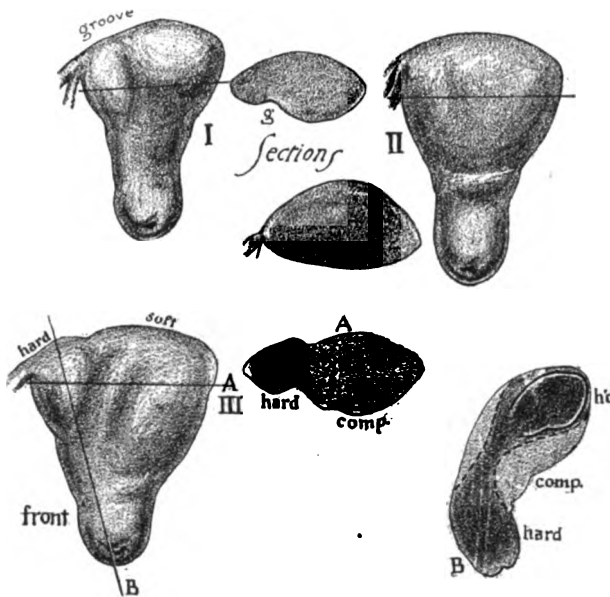


FIG 23.

Fig. 23. I. The furrow without the dense spot. II. The same uterus two weeks later without the signs. III. The same four weeks later with the resisting spot distinct, and two grooves. Section A is transverse and is to be compared with sections at I and II. In section B darkness of shading shows resistance. The dense spot is close to the tubal opening.

present, were, bellying, softness of the body, changing to resiliency, distinct compressibility, and a clear-cut transverse fold on the anterior surface. An Emmet's pessary was placed to keep the uterus in position.

Second examination, five days later, the same signs present.

Third examination, eight weeks from menstruation, bellying and softness of the body of the uterus, folds distinct and compressibility moderate, a short longitudinal furrow on the anterior surface. Examination fairly easy.

CASE VIII. (G. 4. 64.) Twenty-two. First pregnancy; four examinations.

First examination. Six weeks from menstruation, four and one-half from marriage; well marked bulging on the anterior uterine wall, firm body, compressible junction, transverse fold.

Second examination. Eight weeks from menstruation, six and one-half from marriage; bellying distinct and body soft, compressibility moderate, transverse fold showing slightly; to the right of the median line a short groove divides off a small oval portion of the body near the entrance of the right Fallopian tube. (Fig. 23, I.)

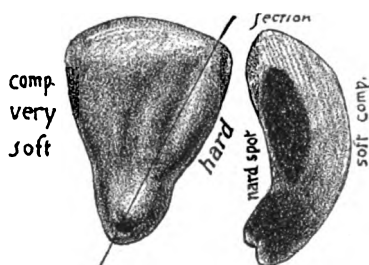


FIG. 24.

Fig. 24. Two furrows, or one fold, with a long, narrow, and well-defined, resisting spot.

Third examination. Ten weeks from menstruation, eight and one-half weeks from marriage; bellying distinct and body elastic, compressibility pronounced, transverse fold showing fairly, the longitudinal furrow faint. (Fig. 23, II.)

Fourth examination. Fourteen weeks after menstruation, twelve and one-half weeks after marriage; the main part of the body of the uterus soft, compressibility pronounced, transverse folds present, and a double longitudinal furrow is easily mapped out, while the small oval spot in the right horn is felt to be hard and resisting to the touch. (Fig. 23, III.)

Fifth examination. Sixteen weeks since last menstruation began; shows very little difference in consistency between the two sides, although intermittent contractions are well marked.

CASE IX. (G. 4. 88.) *Æt.* thirty; first pregnancy; unwell eight weeks previous to examination; intercourse immediately following; nausea of three weeks duration. The uterus is broad and flat, the body very soft and compressible both at the isthmus and above, except on the left side below the insertion of the Fallopian tube, where a distinctly resisting portion, comprising nearly one-fourth of the body of the organ is detected, which is separated from the main part of the body by a furrow. (Fig. 24.)

Second examination four days later shows less compressibility, because the whole body of the uterus seems more globular and distended, while two furrows can be traced across the organ, and there is resistance to the touch most distinctly on the lateral borders of the uterus.

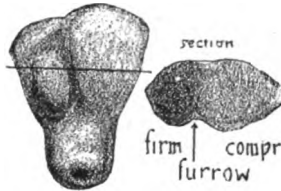


FIG. 25.

Fig. 25. The dense spot located low in the body of the uterus.

CASE X. (O. I. 236.) Twenty-six. Second pregnancy; nine and one-half weeks from menstruation, eight and one-half weeks from subsequent intercourse; uterus lying low on pelvic floor, fundus near coccyx, cervix back of symphysis, with a well marked transverse fold above the junction of body and cervix. Reposition was readily effected and the uterus was then found to be firm to the touch throughout, and to show no signs of pregnancy except moderate general enlargement and a clean-cut transverse fold.

Second examination, thirteen and one-half weeks after menstruation; uterus in good position, body broad, showing two longitudinal grooves and a distinct firmness of texture on the right side.

CASE XI. (G. I. 114.) First pregnancy; thirty-seven days since last menstruation; uterus but slightly enlarged and markedly anteflexed; bulging fairly distinct; the body somewhat softened, becoming elastic under the examining finger, with a well defined denser spot on the right side between the right Fallopian tube and the cervix, separated from the main part of the body which is soft, by a shallow furrow. (Fig. 25.)

CASE XII. (G. 4. 34). One miscarriage. Unwell five and one-half weeks ago; intercourse four and one-half weeks ago. Uterus had been sketched just after period, and is shown laterally in section at X, Fig. 26. Moderate compressibility now present; slight bulging. At

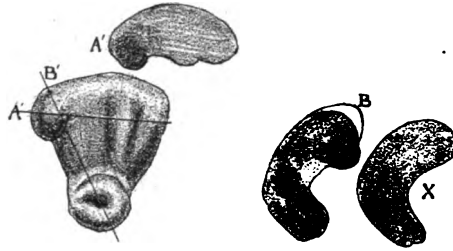


FIG. 26.

Fig. 26. Furrows and dense spot. The section of the non-gravid uterus is shown at X, the front of the pregnant organ at the left, and sections of it at A and B.

right cornu a hazel nut projects like a fibroid, and is dense to the touch, while the rest of the body is soft, and a ridge or fold is felt on the anterior face. (Fig. 26). The section B may be compared with the non-gravid section X. Section A shows the feeling imparted to the fingers, the sense of resistance being indicated by darkness of shading.

CASE XIII. (G. 2. 75). Two children. Unwell six weeks ago; returned from country four weeks ago and dates pregnancy from that

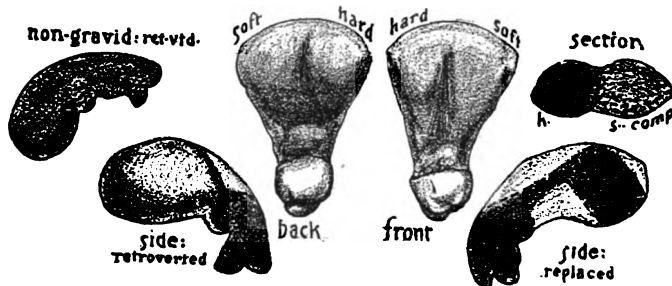


FIG. 27.

Fig. 27. The two signs shown in a retroverted uterus and persisting after reposition.

time. She has a retroversion whenever her pessary is removed, and the condition when not pregnant was sketched as shown in the left upper figure. (Fig. 27). Present condition, retroversion, with a

uterus that can be clearly palpated, and is found to have bellying, moderate compressibility of body and isthmus, and a transverse fold, with a groove nearly in the median line and a well defined difference in resistance on the two sides. (Fig. 27). After reposition the groove can also be found in front as well as posteriorly and the dense spot is found to remain in the same position as in the retroverted condition; the compressibility being more distinct. (Fig. 27). The figures show these facts. Miscarriage later.

CASE XIV. (G. 4. 82). Aet. twenty-five; first pregnancy; last unwell four months ago and exposed just afterward: some nausea and

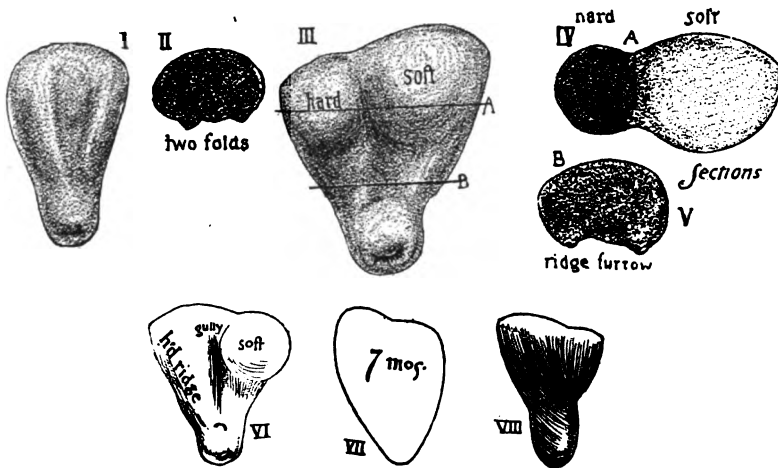


FIG. 28.

Fig. 28. A series of sketches that show the steps of the development of density and furrows in a uterus that is probably abnormal, or asymmetrical. Beginning with two folds, on the front, seen in perspective and in section in I and II, the furrow back and front appears and is shown in III and IV, wherein the hard side is smaller; but in VI the left side has outgrown the right. This development continues in VII, when the signs have disappeared, and the uterus maintains this general form even after involution, VIII.

dubious breast changes. The two sides of the body of the uterus present a distinct difference in resistance to the touch, as the right upper half of the body is very dense and the left upper half compressible.

CASE XIVa. Second pregnancy, forty days since menstruation. Being well acquainted with the size of this uterus, I can be sure it was but slightly enlarged. It showed a clear furrow at the right cornu where the almond could be felt.

CASE XV. (G. 3. 40.) Twenty-two. Second pregnancy; subject to pelvic cellulitis and suffered two considerable attacks of cellulitis during this pregnancy, wherein the pelvis filled with moderately firm exudate. The diagnosis of pregnancy in the presence of retroversion was made at five weeks, and after replacement was confirmed at eight weeks; at four and one-half months a distinct prominence at the left cornu, as though one-fifth or one-fourth of the uterine contents were isolated in that bay-window of the uterus with a groove between, are easily detected. Disappeared as pregnancy advanced; normal labor: nothing after; may be uterus unicornus.

CASE XVI. (O. I. 238.) Thirty. Second pregnancy; retrocession of the uterus and difficult examination twelve days after beginning of period and two hundred and sixty-three days before delivery of small child. Two ridges diverging on the anterior face of the body of the uterus not symetrically placed. (Fig. 28, I, II.)

Second examination. Two and one-half months; one side of the uterus is dense on examination and contains a firm rounded knob, while the other side is so soft as to make its outline difficult to map out; between the two runs a groove back and front, and the transverse fold is found on the resisting side while the soft side reaches higher, owing, probably, to its relaxed condition. (Fig. 28, III, IV, V.)

Third examination. Three and one-fourth months; uterus very broad, right side has become larger, is still very firm, bears a distinct ridge on its anterior face, with a well-defined gully between that and the softer left side. (Fig. 28, VI.)

Fourth examination. Seven months; right side fundus is distinctly higher and more prominent than the left. (Fig. 28, VII.)

Examination four months after delivery; uterus shows no evidence, with the sound or on examination by manipulation, of being bi-fundal or cordiform, but the right half of the body is better developed than the left half and somewhat larger. (Fig. 28, VIII.)

She is now pregnant for the third time, and the *same signs* are found.

Three Cases of Cordiform Uterus or Uterus Bi-fundalis.

CASE XVII. (G. 4. 10.) Thirty-five. One child seven years ago, delivered by the writer, the uterus being in a position of marked latero-version and the fundus very distinctly divided into two compartments; two miscarriages since; unwell last six and one-half weeks before the examination; uterus bound down by strong adhesions in right broad

ligament, somewhat enlarged and showing the transverse fold, while the upper part of the body has a groove on both the posterior and anterior surfaces, with a depression on the fundus, all distinctly marked. (See Fig. 29) Delivered later.



FIG. 29.

Fig. 29. Uterus bicornus or septus in early pregnancy, lateroverted.

CASE XVIII. (O. I. 158.) Thirty-seven. Was delivered by the writer two years previously after difficult forceps labor. On bi-manual examination two weeks after delivery there was an evident division of the fundus into two equal halves, (Fig. 30,a) but as involution progressed and the uterus returned to its normal size the groove across the fundus gradually disappeared entirely.

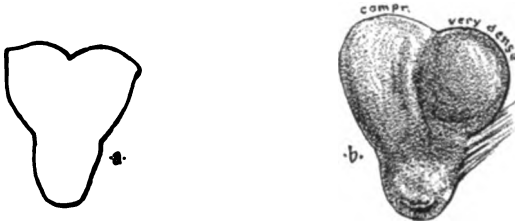


FIG. 30.

Fig. 30. A cordiform of bi-fundal uterus, a. The same, b, in early pregnancy (four and one-half weeks) with marked increase of resistance on the left side after manipulation, while the right side remains compressible. Two furrows with a narrow fold between is seen in the median line.

First examination ; she came with a history of menstruation four and one-half weeks previously and intercourse three and one-half weeks previously, her period five days overdue ; the signs present were bellying, a little elasticity, and a transverse fold ; on more careful examination it was found that the left half of the uterus became dense and firm under manipulation while the right half remained soft, and at the same time a *double* furrow was easily felt between the two portions of the body that were of different density. (Fig. 30, b).

Second examination ; six and one-half weeks after menstruation and five and one-half after intercourse. In almost every point the previous signs were confirmed. She miscarried ten weeks after menstruation.

CASE XIX. (O. 1. 189.) Twenty-eight. Second pregnancy ; a lacerated cervix ; three examinations ; first examination six and one-half weeks after menstruation and four and one-half weeks after the suspected coitus, shows the belying of the body ; softness of the body,

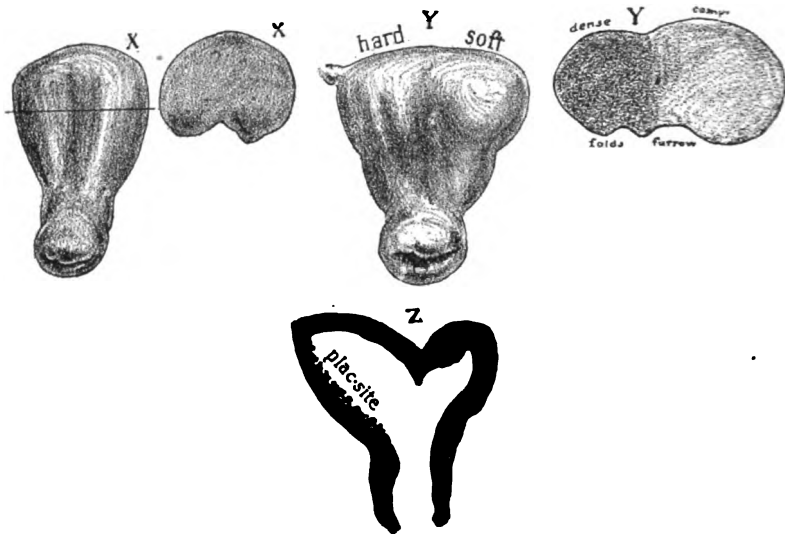


FIG. 31.

Fig. 31. A case that shows the resistance to be on the side where the placenta is situated. X. Two hard folds on the front of the uterus. X, section transverse of the same. Y, later front view of same organ, the right half being very firm, the left soft. Z, the findings when curetting this uterus after miscarriage, with a placental site on the right and a division of the fundus in half. A bi-fundal or cordiform uterus, since, unimpregnated, the organ is symmetrical.

changing to elasticity ; compressibility of the isthmus ; and the transverse fold.

Second examination nine and one-half weeks after menstruation, seven and one-half weeks after coitus ; belying, softness of the body and compressibility are distinctly present, while up the anterior face on one side of the median line runs a groove flanked by two flat ridges. (Fig. 31, x).

Third examination, eleven and one-half weeks after menstruation and nine and one-half after coitus. A distinct difference between the two sides of the body of the uterus is easy to detect; the right contracting on very moderate palpation and becoming distinctly dense, while the left side remains soft. Between the two sides a groove is felt with a soft ridge on one side and a firm ridge on the other. (Fig. 31y.) Three days after this examination the patient miscarried (probably intentionally) and I had the happiness of being obliged to curette the uterus with the finger. On the right side was found the placental attachment and the large cavity in which the greater part of the ovum must have been contained. (Fig. 31z).

We offer, then, tentatively, *six bi-manual signs of early pregnancy*. Stated in the order of their appearance and importance, and in the order of the frequency with which they are found, they run as follows,—except that compressibility of the isthmus and the change in consistency of the body possible outrank the rest:—

- | | | |
|---|---|--------------------------------|
| 1. Bellying or bulging-out of the body of the uterus. | } | about
four to six
weeks. |
| 2. Elasticity or bogginess of the body of the uterus. | | |
| 3. Compressibility of the lower uterine segment | | |
| 4. The transverse fold. | | |
| 5. The longitudinal fold or furrow. | } | about six to
eight weeks |
| 6. The denser spot. | | |

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EDITORIAL.

THE PAN-AMERICAN CONGRESS.

The first Pan-American Congress took place at Washington on the fifth of last September. In view of the great commercial depression, of the attractions of the White City which at this time were at their height, and of the unfavorable time of year for the meeting at the capitol, it is a great surprise that Doctor Reed and his efficient aids were able to achieve so great a success.

The *raison d'être* of such an assembly is evident. It affords an opportunity for personal discussion of subjects of continental interest by men who live too far apart to make this practicable in any other way. This discussion is not only to be looked for after the reading of papers in the lecture hall, but also under the softening influences of the banquet-board. These discussions are of more importance than the mere presentation of papers and, in our opinion, it should be the aim of those managing such assemblies to foster them. The organizers of the International Congress at Brussels, which was handicapped to so great a degree by the cholera, made such an attempt and with sufficient success to show the great advantages of such a plan.

The subjects presented to be considered at the meeting should have claims of originality or should be designed to secure discussion.

It may be urged that it is difficult to determine what is original and if the line be sharply drawn there would be few papers at the meeting. If the managers of the Congress had the courage to

appoint but three papers for each section and provided interesting discussions which it was known would take place at the time appointed, so that members could make plans to hear what they wanted and utilize the remaining time in visiting friends or seeing objects of interest in a strange city, we venture to assert that such a meeting would find unparalleled success. It should be the work of the committees to judge what was worthy, and though the task be difficult it could be met as in other professions. Committees of artists determine what pictures have sufficient merit to appear in exhibitions and where they shall be placed. The position of the picture influences its sale to a great extent so that no more troublesome element could be brought into the matter, yet it is conceded that the plan has been of great service to art by preventing worthless pictures filling important space. In addition to the advantage of excluding work which consumes time and is without special value, the formation of such committees would prove a valuable object lesson and tend to establish a standard which might be used with great benefit in the national societies.

We suggest that the Section of Gynæcology be divided into a Section of Midwifery and a section of the Diseases of the Female Pelvis. These committees should consist of not less than ten experts and care should be taken that a gentleman devoting most of his attention to gynæcology should not form part of the obstetrical section, nor one who is known only as an obstetrician fill a position on the gynæcological committee. A greater number of men should be appointed than the actual number of the committee to provide against accident, and also to have the requisite number of judges to pass on contributions from the members of the committee.

The difficulty in securing harmonious work from committees in the past has been due to several causes. It has been difficult to get the men together. The assumption that this is necessary is erroneous; indeed it is not desirable to have a meeting of the committee. Each committee-man should have passed judgment on the work submitted to him before he reaches the meeting, and it should be a point of honor for the members of the committee not to discuss with one another the paper submitted. This would do away with the electioneering tactics sometimes resorted to to influence the appointment of a friend or the rejection of an enemy.

Another difficulty is the amount of work necessary to read lengthy and illegible mss. This objection may be obviated by having all papers

type-written and submitted in abstract, not to be longer than two thousand words. When this abstract is received by the secretary of the section it should be duplicated and sent at once to all the members of the committee who must return it within a limited time with their judgment endorsed upon it. If any point be raised as to priority of claim, etc., this should be communicated to the authors by the secretary, so that no feeling could arise between the author and the committee-man, and the former could, perhaps, correct a misapprehension of which otherwise he would know nothing.

The rule to guide the committee in determining what could fairly be called original might be stated as follows: Any new discovery in the anatomy, physiology, pathology or treatment; and to this class might be added papers substantiating or disproving facts generally or partially accepted.

The committee could then select the subject which at that time was of the greatest interest for discussion, and those papers should be procured which are best calculated to bring out the important points in the discussion.

These suggestions have occurred to us while watching the progress of this Congress, which has such great possibilities, and we are sure that under the guidance of men like Pepper, Reed, and the many others who have given to it so much time and thought, that a magnificent structure will arise which will bring us in touch with our South American cousins.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting, October 3d, 1893.

H. MARION SIMS, M. D., Vice-President, in the Chair.

Carcinoma and Myoma of the Uterus.

Dr. A. F. CURRIER presented three specimens of carcinoma of the uterine cervix, and two specimens of myoma of the uterus, the second one being complicated with a large ovarian abscess.

Dr. CURRIER also presented five specimens of uteri removed by him since the last meeting of the Society, three for cancer, and two for myoma; two were removed through the vagina and three by abdominal incision. Two of the operations resulted fatally, and three in recovery. Certain peculiarities in each case seemed to him to be worthy of mention.

Carcinoma Cervicis Uteri; Hysterectomy.

CASE I. Patient thirty-seven years of age, three children, labors normal. Began to flow profusely November 25, 1892, and has flowed almost constantly since. The uterus was retroverted, portio vaginalis breaking down, bleeding easily; disease extending to vagina and left broad ligament, but the uterus was movable. Vaginal hysterectomy May 26. Peritoneum and vagina closed, a small portion of diseased tissue being included in the wound, and not readily removable. On the fifth day there was evidence of septic intoxication. On the sixth day the vaginal wound was opened and about a tablespoonful of foul-smelling blood removed. The wound was irrigated and all possible means of overcoming the sepsis used, but in vain. Death resulted on the seventh day. The manifest error was in closing the vaginal wound and shutting in noxious secretions. It is a question whether the plan of closing the vaginal wound after such operations is a wise one.

Carcinoma Cervicis Uteri; Hysterectomy.

CASE II. Patient, thirty-three years of age. Married, eight children, labors normal except the last, October, 1892, in which the

child was still-born. Bleeding began three months before last impregnation, three severe floodings during gestation. Patient very anæmic and hysterical. Vaginal portion much corroded, circum-uterine tissues infiltrated. The vaginal portion was amputated and the corpus curetted June 12. Two days later there was a severe hæmorrhage. June 16 a strong solution of chloride of zinc was applied on a cotton tampon, severe pain and inflammation resulting. June 30 hysterectomy was performed by abdominal incision. The pelvis was very deep and the operation unusually difficult, the patient suffering profoundly from shock. The following day only one and one-half ounces of urine could be drawn, and no more was obtained subsequently. The patient died on the following day and the autopsy showed that both ureters had been ligated. The ureters were in close contact with the uterine arteries and it would have been almost an impossibility to ligate the latter securely without including the former also. This case demonstrates the necessity of a knowledge of the course of the ureters in performing such operations, and the value of an instrument like Howard Kelly's ureteral catheter for isolating the ureters before tying the uterine arteries.

Carcinoma Cervicis Uteri; Hysterectomy.

CASE III. Patient fifty-three years of age, three children, one miscarriage. Menopause at forty-five. Bleeding first noticed in the summer of 1892 after coitus. Constant watery offensive discharge. Uterus fixed and hard, vaginal portion retracted. A high amputation, apparently with the actual cautery, was performed by another surgeon in the latter part of June. August 7 vaginal hysterectomy was performed, and was quite difficult on account of narrowness and atrophy of vagina, and fixation of the uterus. The stumps were brought into the vagina, the appendages were not removed, and the peritoneum was closed. The vaginal wound was left open and drained satisfactorily. The patient was able to sit up on the fifth day. On the ninth day several sloughs were removed with the curette, and three days later the Paquelin cautery was thoroughly applied over the entire wound. August 31 a small patch of suspicious tissue was found in the scar and removed, a tampon saturated with chloride of zinc applied, and the patient placed upon treatment with bromide of arsenic and iron and strychnia. September 25 the wound was soft and normal in all respects and the patient in very good condition. Of course the future prospects of the patient are not brilliant, but certainly her

chances will be improved by close watching, the use of powerful tonics, and the actual and potential cautery when indicated.

Myoma Uteri; Hysterectomy.

CASE IV. Patient thirty-one years of age, single. Has been seen occasionally in consultation during past two years. Has suffered much from pain and hæmorrhage, and was thus practically prevented from earning her living. The development of the uterine tumor has proceeded notwithstanding the use of galvanism both by her own physician and by myself. August 25 hysterectomy was performed by abdominal incision. The operation was very easy, the peritoneum being stripped away from the uterus, fore and aft, the uterine arteries and veins ligated in continuity, the broad ligaments opened their entire length, round ligaments tied off, uterus removed and peritoneal wound closed. On the third day there was a sharp peritonitis with much tympanites and vomiting. This was relieved by the use of a powder containing calomel, cocaine, bismuth and cerium, the bowels moved freely and convalescence rapidly ensued. The highest temperature at any time was 100 $\frac{2}{3}$ which was reached on the sixth day.

The patient now seems entirely well.

Myoma Uteri, Large Ovarian Abscess; Hysterectomy.

CASE V. Patient forty-three years of age, married, never pregnant, first seen August 27, in Greenwich, Conn. She was then very weak, hysterical and septic. There was marked mitral incompetency with rapid and feeble pulse, and the general condition was as bad as it could be. The vaginal portion of the uterus was drawn up almost out of reach, the uterine tumor extended nearly to the umbilicus, and a very painful tumor in the left iliac fossa was thought to be an intra-ligamentous fibro-myoma. The kidneys were in good condition. The patient had been losing blood a long time and was almost exsanguinated. The outlook was a gloomy one, and the utmost that could be attempted was thought to be a Hegar operation, rapidly performed. September 10th I operated. The left tube was quickly found, but the ovary could not be made out. Thinking it might have merged into the supposed intra-ligamentous tumor I endeavored to remove a portion of the latter immediately in contact with the tube. The hæmorrhage was very vexatious and much time was lost in checking it. Finally the appearance of pus which continued to well up in considerable quantity showed me that I was dealing with a large ovarian abscess

filling the iliac fossa, and not with an intra-ligamentous fibroid. The situation being now clear the tumor was quickly stripped from its bed in the pelvis and removed. The uterine tumor was then eventrated, the abdominal wound closed around it, the peritoneum stripped away, fore and aft and stitched in the wound, and a large ligature then carried through the abdominal wound and the pedicle of the tumor. The latter was then cut off with the Paquin cautery knife, and the stump thoroughly charred. The patient seemed to be *in extremis* and the dressings were applied after she was removed to her bed. The foot of the bed was raised about eighteen inches, and a pint of hot salt solution injected *per rectum*. Under the free use of strychnia and alcohol she rallied quickly from the operation and with the exception of shock for the first two days passed an almost uneventful convalescence. I removed the stump on the fifteenth day, the surrounding tissue being all in a condition of healthy granulation. The following day she was allowed to sit up and I have been informed that she has steadily progressed since then.

DISCUSSION.

Dr. H. J. BOLDT said that the author had erred in supposing he had adopted the speaker's method of doing vaginal-hysterectomy; for, in this method, there is no possibility of any trouble arising, as the entire stump is in the vagina, and not in the peritoneal cavity. He would not say that he would never drain, because there are occasional cases where drainage is imperative, but he had not drained a case for over a year. He did not understand what Dr. Currier meant when he spoke of closing the peritoneum, and then draining through the vagina, for when we drain it should be from the peritoneal cavity, yet this cavity had been already closed in his case.

Referring to one of the specimens of myoma, the speaker said that in this uterus the muscular structure apparently predominated, and the interstitial fibroid on the left side is such that it seems hardly justifiable to undertake total extirpation, because in a tumor of that size the chances are greatly in favor of the tumor shrinking up and giving no trouble whatever. If, on the other hand, the tumor were large and soft, and the connective tissue predominated, he would say that a salpingo-öophorectomy would be very dangerous. He was speaking now of general principles, and not of this particular case. Taking into consideration the histology, and the cause of the tumors, he believed it would be very desirable to tie the uterine arteries through the vagina in

these cases. Martin, of Chicago, claims priority in this operation, but Dawson really proposed it first. Gottschalk quite recently in the Brussels Congress read a paper, also prior to Martin, in which he enunciates the pathology quite correctly.

If we tie the uterine artery, the nutriment of the tumor is cut off, and in all properly selected cases the results have been satisfactory. The speaker said he had done it in one case of small myoma with good result.

Dr. CURRIER, in closing the discussion, said that of course each particular case must be decided on its merits. This one had been under his own observation for two years, and under the observation of a friend for a considerable longer period, and after careful consideration it was decided that the cure would be more radical and more quickly obtained by this operation than by the simple Hegar operation.

Now, discussing the question in the abstract, he thought if we can feel reasonably sure that the patient will be subjected to no greater risk by the removal of the tumor and ovaries than by the removal of the ovaries alone, she has a right to demand as radical means as possible. The tendency of recent work and thought was in that direction. Where we can ligate the arteries and veins in continuity, and split up the broad ligament fully its entire extent, and ligate the round ligaments, leaving no stump whatever, the conditions of healing become fully as simple as if only the tubes and ovaries were removed; and under such circumstances as the danger is no greater it would seem proper to resort to the more radical measure. In the particular case under discussion, the woman was single, and of such an age that it was not probable she would marry, or if she did, that she would become pregnant. Certainly the result showed that the choice of operation was correct.

Dr. R. L. DICKINSON made some remarks on

Some Labor-Saving Uses of the Rubber Type Stamp in Taking Case Histories.

We know that we ought to keep full histories of our cases in private practice, but few of us do it.

Is there any way to make the labor of writing easier?

The history blanks in use at hospitals are too cumbersome for office use. The pure specialist, such as the ophthalmologist, who sees

none but his own line of cases, can have a printed book of history sheets, but we who begin a variety of histories without knowing on what region we shall finally need to take fuller notes, cannot readily use a complete printed scheme. A printed slip to be pasted in blisters the page and causes the book to gape. But for any set of answers that a man is frequently noting down, or for any special subject that he is temporarily studying, a stamp seems to meet the requirements. Nearly all the writing is saved by the method of crossing off unneeded words.

Here is an instance, G standing for gynæcological case:—

G	MAR.	YRS.	CHILDREN; OLDEST	YGST.	MISC.
LABORS SEVERE FORCEPS			PUERPERIUMS FEVER		
MENSES FORMERLY NOT PAINFUL IRREGULAR					
NOW PAIN NONE SLIGHT SEVERE CRAMPS FRONT R. L. ILIAC REG.					
BACKACHE BEFORE DURING AFTER BETWEEN CONSTANT					
IN BED DYS.					
FLOW FREE SCANTY			CLOTS MEMBRANE		
IRREGULAR EVERY DAYS WEEKS LASTING DYS. LAST MEN.					
VAG. DISCHARGE CONSTANT PROFUSE SLIGHT MUCUS PURUL FOUL					
URINATION FREQUENT NOT PAINFUL DYSCHIZIA DYSPAR.					
WALKING WORKING NOT PAINFUL DATES TROUBLE FROM					

Words not wanted have the pen run through them.

Symptoms that are aggravated are underscored.

Points that are dubious are indicated by a question mark.

If, for instance, the patient is regular, the letters *i r* are struck out. If her main suffering is backache or free flow it is instantly indicated by a line under the word. If vaginal discharge or dyschezia are absent the words are cut out. If it is uncertain whether the patient had puerperal fever or no an interrogation point after the term shows it. We note, we will say, "Menses....Now Pain....severe....*r.* iliac reg....before during....in bed 2 days."

Moreover, by stamping this matter on the left hand side of the page there remains a half page, more or less, to the right, in which to modify or amplify the statements of the schedule.

Where few of the statements are used a neater method is to underline those words, and not cross off anything.

For special studies in clinics stamps are of much value. Here is an item I am stamping on the history blanks in my two services in order to gather statistics as to the amount of motion in the symphysis after symphyseotomy, as compared with the results after ordinary labors and difficult and prolonged or instrumental deliveries:—

CONDITION OF SYMPHYSIS.....DAYS AFTER DELIVERY.		
	MOTION : UP AND DOWN.	BACKWARD AND FORWARD.
STANDING		
SWAYING	NOT PERCEPTIBLE.	NOT PERCEPTIBLE.
FROM FOOT	ESTIMATED AT CM. IN.	ESTIMATED AT CM. IN.
TO FOOT.		
ON BACK	NOT PERCEPTIBLE.	NOT PERCEPTIBLE.
SWINGING	ESTIMATED AT CM. IN.	ESTIMATED AT CM. IN.
LEGS.		

Most new-born male children are found to have well marked preputial adhesions. In a large number of these cases much secretion, and often very adherent secretion, has to be scraped away. For some time I have, in all cases, stripped back the foreskin in the early days even at its tightest, and believe it always necessary because of the frequency of these abnormal conditions. To properly tabulate these cases I am using the following stamp :

PHYMOSIS. AGE DYS. MOS. YRS. FREQ. MICT. ERECTIONS
 PENIS LARGE FOR AGE MASTURBATION
 OPENING TINY SMALL LARGE ELASTIC THICK RESISTING
 ADHESIONS NONE SLIGHT FIRM OVER ENTIRE GLANS ONLY AT
 RETAINED SECRETION NONE LITTLE ABUNDANT HARD ADHERENT
 STRIPPED BACK DRESSING
 FISSURES OEDEMA READHESIONS HEALED DAYS
 REPEATED EVERY 1, 2, 3, 4 DAYS.

In gathering data concerning the physical changes in the vulva produced by self-abuse, a subject on which there is much difference of opinion, yet a condition we must learn to recognize, one only sees cases that are of any real value as evidence at considerable intervals, and one is likely to forget to enter many items in reporting them. The following illustrates the value of the stamp in making a special study wherein completeness is desired :

M. PREPUCE LARGE LONG SMALL SHORT WRINKLED ADHERENT
 CLITORIS LARGE LONG SMALL RETAINED SECRETION
 LABIA MINORA LARGE SMALL RUGOSE PIGMENTED MOTTLED GRITTY
 LABIA MAJORA ROUGHENED VARICOSE VEINS
 URETHRA CARUNCLES SKENE'S GLANDS ENLARGED
 HYMEN SMALL IRRITABLE DISTENSIBLE SHAGGY
 VAGINA ROUGHENED DRYISH ANUS PIGM. PILES
 LEVATOR HYPERTROPHIED SPASM RELAXATION
 ADMITTED DENIED YEARS FREQUENCY
 VULVAR VAGINAL

One readily catches the knack of making a clean printing. A level surface is always needed, and with the hand-stamps, a certain amount of steadiness in holding the stamp. Of the two kinds, the hand-stamp is less expensive and takes up much less room. But it requires more care in printing than the self-inker does. The self-inker is best for very frequent use. With care in stamping the simpler form serves my purpose.

In getting up one of these stamps one chooses any desired wording that will not cover much more space than that of the samples here given ($1\frac{1}{2}$ by 3 inches, or 2×4), as a larger size is more difficult to print evenly. Any kind of type may be chosen, but smaller sizes than those given, print blurred at times. My stamps were made by the Barton Manufacturing Company, 338 Broadway, New York, the firm that make the medical outline stamps for recording and picturing cases; they will submit a book of specimens of type, and proofs, and prices, on request. The examples given cost \$1 and \$1.50 on hand-stamps, and \$3.50 on self-inking stamp.

Each stamp here given is a separate piece of rubber, being a cast of metal type thus set up; but one can buy fonts of rubber type and set them up himself if he chooses.

The method I have described promotes system and thoroughness, is labor-saving and inexpensive, produces sufficiently neat results, and above all, is flexible, so that every man can adapt it to his own needs.

Dysmenorrhœa from Caries of the Coccyx.

Dr. E. H. GRANDIN reported such a case. The patient was a woman, twenty-three years of age, who suffered the most intolerable pain at the menstrual period. She had been curetted and divulsed a number of times by others without any benefit. He found on examination the uterus, tubes and ovaries normal, and that there was excellent drainage from the uterus, and no endometritis, showing that the previous treatment had been thoroughly conducted. On pressing backward, however, he found a movable coccyx, and considerable pain referred to the uterus was produced when this bone was pressed between the fingers. All other measures having been exhausted, and the patient fast becoming a morphine habitué, he decided to operate. On cutting down he found the coccyx not only movable but carious. Since the operation menstruation has been without pain.

DISCUSSION.

Dr. BACHE EMMET asked if there were much displacement of the coccyx forward.

Dr. GRANDIN said there was not; the coccyx was perfectly movable. and there was a history of a fall on this bone two years previously. Caries was not suspected before the operation.

Dr. J. R. GOFFE said that he operated upon such a case several years ago. The patient was a woman, fifty-five years of age, who suffered from pains about the pelvis, and who had much difficulty in rising from her chair, or sitting down; in fact, she could not do this without assistance. Removal of the coccyx was advised, and excision of the two last joints resulted in a cure. He had operated on one other case where there was a coccyx ankylosed in an abnormal position; but this case was unsuccessful.

Dr. R. A. MURRAY said he had seen many cases where pain at the menstrual period originated from the coccyx. At other times there would be no pain except after excessive exercise. Examination of these cases showed the coccyx tender on pressure. In only two cases had he considered it necessary to remove this bone, for the reason that he thought in most cases the pain comes from the attachment of the levator ani muscle to the tip of the coccyx. It is absolutely similar to the dysmenorrhœa often found in females who have hæmorrhoids. With the physiological menstrual congestion there is also necessarily a congestion of the lower part of the rectum, so that if hæmorrhoids be present, they become swollen and painful at this time. An operation on the hæmorrhoids has sometimes resulted in a complete cure of the case without any operation on the coccyx. Of course, in other cases the pain about the coccyx has been due to a fall, and different treatment has been required.

Dr. H. M. SIMS related a case of pain in the coccyx somewhat similar to Dr. Grandin's case. The patient was a young lady who had been perfectly well all her life until one day at school a mischievous classmate pulled out her chair from the table just as she was about to sit down. The end of her spine struck the edge of the chair. From that time on she suffered from a most excruciating dysmenorrhœa. The attending physicians at the school found no fracture or dislocation of the coccyx, and considered her whole trouble due to uterine disease. She was finally brought to the speaker, and an examination showed that the coccyx was broken off, and movement of this bone caused

exquisite pain. This pain was greatly aggravated at the menstrual epoch, so that it gave rise to what was supposed to be an ordinary *dysmenorrhoea*. The explanation given by Dr. Murray is a very good one. In this case an operation for the removal of the bone was advised and performed, and since then, a period of twelve years, she has had no trouble, although she has married and has had two or three children.

Hysterical Aphonia.

Dr. GRANDIN then reported another case of reflex nervous disturbance. This time it was hysterical aphonia, and he reported it with a view of ascertaining what cured her. She was married and had no family difficulties, yet suddenly one year before she had lost her voice. When seen first by him, about six weeks ago, a pelvic examination showed only a slight catarrhal endometritis. A throat specialist found nothing wrong with the larynx or vocal cords. On the supposition that he was dealing with hysterical aphonia, he told her if she could not speak when he saw her next time, he would operate. At his next visit, she still did not speak, so she was transferred to the operating room, etherized, and the uterus divulsed and curetted. Then finding an adherent prepuce to the clitoris, these adhesions were thoroughly broken up, following the suggestion in the recent paper by Dr. Robert T. Morris. When the patient came out of the ether, she began to talk, and since then there has been no trouble with her speech. The interesting question was, which of all these measures can be credited with curing her?

DISCUSSION.

Dr. BARROWS said he had had a similar case occurring in a young woman. It had lasted about one month. Ether was given for the purpose of examining the uterus, and from the time she got fairly under the ether, she began to talk. The examination was accordingly discontinued. As there has been no further trouble it is probable that the ether was the curative agent.

A Curious Case of Impregnation Without Penetration of the Male Organ.

Dr. GRANDIN reported this case as a curiosity. About six weeks ago he was asked to examine a rather anæmic young girl who had not menstruated for two months. She absolutely denied having had sexual intercourse. Examination showed the hymen practically imperforate,

there being a simple pin-hole opening. However, the mammary signs of pregnancy were present, and there was a bluish discoloration about the urethral bulb which was suspicious. He refused to give a positive opinion without etherizing her and making a bi-manual examination. Two weeks later she came to his office, and with the exception that the breasts were somewhat more developed, her condition remained unchanged. As she intended to be married before long he advised on general principles that the ceremony take place at once. His advice was followed, and after her marriage she returned and said that she had gotten certain information from her husband which might throw some light on her condition. It seems that about three months ago her lover was about to attempt to have connection with her when the semen was prematurely ejaculated into his hand. This hand was then brought in contact with the external genitals of the girl. The opening in the hymen was not sufficiently large to admit of the introduction of a pin, but was sufficient for the spermatozoa, for she was fully three months gravid. Hence this is an undoubted and rather remarkable instance of migration of the spermatozoa from the hand against the vulva through a practically imperforate hymen.

Conservative Surgery of the Uterine Appendages.

Dr. C. C. BARROWS read a paper with this title. (See page 982).

DISCUSSION.

Dr. BACHE EMMET said he had had no experience in this conservative surgery, as it had been his practice to follow the older method of ablating the tubes entirely if they were found to be diseased. The point brought to our notice in the paper is very valuable if the opening established in the tubes will remain, and if in any instance the author is able to record a case of subsequent pregnancy. The menstruation has certainly been relieved. The question is whether the extra time taken in this method of operating over the more radical measure does not more than counterbalance the good done. Where the tube is patent, and the ovary alone is the object of attack, too much cannot be said in favor of saving as much as possible of the healthy tissue.

Dr. BOLDT asked what precautions the author took to determine the character of the pus in each case, because if the tube contain virulent cocci the procedure is certainly a very dangerous one.

Dr. BARROWS replied that he had not taken the precaution to make a microscopical examination at the time of operation, because he did

not advise the method in any case where the pus is not shut off in the end of the tube. This exists in quite a large proportion of the cases.

Dr. BOLDT said the results obtained by the writer were certainly very satisfactory. He had not yet dared to adopt this method because whenever he found a pyosalpinx he had always felt impelled to remove the tube. The operation had been in vogue for about three years, though most of those who had advocated it most ardently had abandoned it with the exception of its original advocate—Martin. Even if the precaution be taken to make a microscopical examination of the pus at the time of operation, as carried on quite extensively by some, he would not feel that the information given by such an examination was very reliable.

Dr. A. H. BUCKMASTER had read with interest the reports of microscopic examinations made by investigators during the operation, but they had not been shown to be very reliable. The suggestion of the writer to form an artificial *ostium abdominale* in all cases where the discharge is harmless is a matter of much importance. It would take but little time, and would leave a possibility of pregnancy.

Dr. CURRIER said these efforts of conservative surgery were extremely praiseworthy, and yet he thought most of the members must feel that many questions arise in connection with the paper which yet remain unanswered. How can we determine without microscopical examination whether or not the mucous membrane of the tube is diseased? It is not easy to differentiate between catarrhal salpingitis and a pyosalpinx. Again, after a new ostium abdominale has been made, will it communicate with the ovary, and will the tube become the oviduct as before? If not, nothing has been gained. How does the writer know that his cases will have an average of twenty years of menstrual life? Perhaps before long many of them will require a subsequent operation.

Reference had been made to work of Martin. This subject was discussed in the Berlin Obstetrical Society only a few months ago, and Zweifel had said he had come to the conclusion that when the tube had become enlarged to the size of the finger, it was not possible to save it. Martin reported that he had operated forty times, and that thirty-four were living, but he could not say that one of them had become pregnant; hence, if the great object of this method is to favor pregnancy, it is apparently a failure.

Dr. BUCKMASTER remarked that if the speaker would turn to the NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS he would find a

previous report on Martin's cases in which he would find that Dr. Martin had a case where pregnancy followed the conservative operation.

Dr. GOFFE said he had had no personal experience in resecting the tube, but he was extremely interested in this field of work, and he thought the author should be congratulated on his report of eighteen cases with such excellent results as regards the relief of pain and the regulation of the menstrual function. We are apt to think that unless we enable the patient to become pregnant, the operation is a failure. Such a result, however, is hardly to be looked for in the majority of these cases; it is rather a matter of good fortune. If we can restore these people to a healthy menstrual life, and can prolong that menstrual life even for years, we are accomplishing a great and good work; for it is distinctly in the line of conservative surgery. It is particularly gratifying at this time, for it is well known to what extremes we have been led in abdominal surgery.

The speaker said he had not resected any tubes, but he had resected ovaries; none of these cases had become pregnant, but the dysmenorrhœa had been relieved.

Dr. A. PALMER DUDLEY said we would never arrive at true conservatism so long as doubts of this kind were allowed to exist; the only way to do is to take up just such timely reports as that presented in this paper. He thought we had done more in this direction than they had in Europe.

He had been working in this field of conservatism since early in 1887, and had more than once resected the tube—every time with a good result. As to the doubt raised by Dr. Currier, he would say that the ovary is fastened near to the stump of the tube, as stated by the author. In cutting off the tube, the top of the broad ligament is opened; this must be closed again, and so the remaining portion of the broad ligament is drawn with the ovary close to the stump of the tube. He could report more than a dozen cases where portions of the tube or ovary had been resected; in every one he was positive he had relieved the menstrual pain and intra-ovarian pressure, and the tubal dysmenorrhœa. To be sure, he had the same time curetted the uterus because he thought the two methods should always be associated in order to strike at the root of the trouble.

A good diagnostician will make the diagnosis of gonorrhœa before he opens the abdomen, and nine times out of ten he can do it if he is direct in his method of questioning. There is one important pathognomonic sign which is always present; he had never seen it in a woman

in whom he could not elicit a history of gonorrhœa—he referred to the persistent redness of the mouths of the vulvo-vaginal ducts. In every case of gonorrhœa he had seen he had found these ducts irritated, and discharging. In every case of this kind, he had made his diagnosis before performing laparotomy, and had confirmed it by a careful inquiry. Certainly the major portion of pyosalpinx cases result from miscarriage or accident after delivery, and not from gonorrhœa, and in such cases he considered it perfectly safe to resect the tube. If we can preserve the function of menstruation, even though they do not become pregnant, we have certainly accomplished a good deal. In two or three of his cases, a second abdominal section had been necessary in the course of his conservative work, but still he thought his efforts were in the right direction.

Dr. MURRAY said that the author stated that most of his cases were between twenty and thirty years of age; he would like to ask how long the condition of pyosalpinx had existed, or how long a time had elapsed from the attack of gonorrhœa to the pyosalpinx.

Dr. BARROWS replied that he did not date these cases from an attack of gonorrhœa; he simply reported one case which he was able to follow from an initial attack of gonorrhœa. The cases reported were admitted to Bellevue Hospital suffering from tubal trouble, and on opening the abdomen pyosalpinx had been found. It is very difficult to obtain histories from this class of patients, but they usually come to the hospital complaining of years of trouble.

Dr. MURRAY referred to the conclusions he had drawn in a paper which he read before The American Gynæcological Society last May. Six cases were reported which had been followed carefully; of these, three were puerperal, and three gonorrhœal. They had fixed and distended tubes, and adherent ovaries. Three of these cases were seen by two members of this Society, and they said nothing short of an operation would be of any avail; yet these patients got well without even resection of the tubes, and every one of these women subsequently had children. From this he concludes that if we dilate the uterus and treat the dysmenorrhœa, in a number of cases which we believe to have closed tubes, there will be an emptying of the tubes, and a cure may be effected without the performance of cœliotomy. It is a point of vital importance to determine whether or not such patients become pregnant subsequently, and also if there is not much danger in performing operations after gonorrhœa. The shorter the period elapsing between the attack and the operation, the greater the danger. In out-

patient department work, it is well known that in almost every case of gonorrhœa there is tenderness over the ovaries and tubes, yet about ninety per cent. of these cases recover, otherwise there would be about ten times more cœliotomies than there are at present. Hence, do not be too hasty in condemning the patients to cœliotomy, but give plenty of time to test the possibility of curing them by other means. In the speaker's opinion, only a chronic pyosalpinx should be operated upon, that is to say in cases where the tubes cannot be loosened and elevated.

One point Professor Kelly had brought to his mind recently, viz.: that he had found by careful bacteriological examination and observation of the external appearance of the tube, that in a constantly increasing proportion of cases, as the examination was more perfectly made, instead of pyosalpinx, there is tubercular disease of the tubes and ovaries. Now, what good purpose will be served by leaving a tuberculous ovary behind?

Dr. W. M. POLK thought too much stress had been laid on pregnancy as the thing to be expected after procedures of this kind. The procedure under discussion strikes directly at the proposition which has too long dominated gynæcology viz.: the artificial production of the menopause. There was a time when in our ignorance it seemed to be necessary to check menstruation in order to cure ailments which we attributed entirely to that function; but with the introduction of widespread abdominal section, and a study of these organs in position, we have learned to differentiate the conditions, and we now know that a certain grouping of grave symptoms which were formerly considered sufficient to justify an operator in producing the menopause, no longer holds good. He also thought that due regard should be given to the well recognized necessity for the preservation of the functions intact, and that due weight should be given to actual observation when faithfully and candidly reported. If it be found that these observations are not in keeping with such as have been reported elsewhere, the affirmative vote should not be so promptly given in favor of the other reporters.

The question of the personal equation necessarily thrusts itself upon one in connection with a subject of this kind, and where we have every right to believe that reports are made with a due regard to the scientific framing of them, so that each one can judge as to their value, then these should constitute the basis for decision. The whole subject should be discussed on the broadest possible ground, and every effort made to arrive at some conclusion as to its possible value.

Dr. BACHE EMMET asked if in the case in which the author had occasion to re-open the abdomen, the *ostium abdominale* was found open at the time of the operation.

Dr. BARROWS replied yes, and that at this time there was no evidence of the resection of the ovary.

Dr. BOLDT explained that the operation referred to by Dr. Polk was not the same as that to which he had alluded, for this latter was applicable to pyosalpinx cases, and involved the removal of a portion of the wall of the tube.

Dr. BARROWS, in closing the discussion, said that by resection of the tube he meant the amputation or removal of a portion of the tube outside of that part of it which is apparently normal, and not the removal of a portion of the wall of the tube ; in other words, that portion which, lying low in the pelvis and unable to empty itself into the uterus, has become filled with pus, which has become encysted, the lumen of the tube being closed behind it.

The primary object of the operator in these cases was to relieve the pain and the dysmenorrhœa, and while this could be done very easily by total extirpation of the tubes and ovaries, it would leave the woman without menstruation and ovulation. Now, if relief can be obtained just as surely and safely by another method without interfering with menstruation and ovulation, to say nothing about the possibility of conception, then he considered the latter the better plan of treatment.

Removal of the Uterus in Diseases of the Uterine Appendages.

Dr. W. M. POLK read a paper on this subject.

Dr. J. E. JANVRIN said that as the time allotted for discussion had expired, he would move that the discussion of this paper be postponed until the next meeting, and that it should then take the place of the usual paper. This motion was seconded and carried.

(Continued from October Number.)

TRANSACTIONS OF THE SIXTH ANNUAL MEETING OF
THE AMERICAN ASSOCIATION OF OBSTETRICIANS
AND GYNÆCOLOGISTS.

Held in Detroit, Mich., June 1, 2 and 3, 1893.

(Abstract.)

DR. EUGENE BOISE, of Grand Rapids, Michigan, read a paper on
THE NATURE OF SHOCK. See October number, page 875.

DR. WALTER P. MANTON, of Detroit, read a paper entitled
A CONTRIBUTION TO THE PATHOLOGY OF SURGICAL DISEASE OF THE
GALL BLADDER.

The chief purpose of this paper is to present the history and post-mortem find in a case of diseased gall bladder and ducts. The patient whose history is given was an inmate of the Eastern Michigan Asylum, where he had worked on the farm and enjoyed the privileges of an open-door cottage. Several months previous to his demise he had developed a jaundice, but remained otherwise well. Three weeks before his death it was noticed that he was growing weaker, and he was therefore transferred to a hospital ward. A few days later he had a severe chill, followed by several dark-colored, watery evacuations. Previous to this his stools had been wanting in coloring matter, but the urine had been loaded with bile. No tumor in the region of the liver could be found, but a mass, taken to be the large lobe of the liver, could be felt extending a hand's breadth below the margin of the ribs. The patient failed rapidly and a herpetiform eruption appeared on his lips, eyelids and anterior nares. These blisters were filled with bloody serum, and, breaking down, formed repulsive crusts.

The post-mortem examination showed a plastic peritonitis in the right hypochondriac region, which glued the omentum, transverse colon, and coils of the small intestine into an almost inseparable mass. The gall bladder was enlarged and contained about two ounces of a somewhat grayish, viscid fluid, and one small friable stone. Its outer coats were much thickened, but several ulcerated spots on the interior surface had so thinned the wall at these points that the bladder ruptured during removal. The cystic duct was free for nearly an inch from its distal

opening, but at the gall-bladder end a firm, fibrous wall, quite one-eighth of an inch in thickness, completely shut off the duct. The hepatic duct was much enlarged and contained a tumor one and one-eighth inches in diameter. Microscopical examination of this growth showed it to be of a carcinomatous nature. The common duct was about normal in size.

The entire absence of symptoms, except jaundice, in this case made a diagnosis impossible and all operative treatment out of the question until the patient had become too far reduced.

Dr. JAMES F. W. ROSS, of Toronto, followed with a paper entitled

A FEW PRACTICAL NOTES ON THE ESTABLISHMENT OF ANASTOMOSSIS
BETWEEN THE GALL BLADDER AND INTESTINE FOR OBSTRUCTION
OF THE COMMON DUCT, WITH THE RELATION
OF A CASE OF OBSTRUCTION OF THE COM-
MON DUCT BY SMALL GROWTH.

He said that, after reports of work done by Gaston on dogs and by other operators on the human subject, he determined to operate on the first suitable case that presented itself. The differential diagnosis between malignant growth obstructing the common duct and the obstruction by stone of the same duct could not be made. He related a case of obstruction by a calculus mistaken by himself for one of malignant obstruction, and then related the history of the case upon which he based his remarks.

The case was that of a woman only twenty-six years of age, with all the usual symptoms of obstruction of the common duct, and with a history of the sudden onset of pain a year before the jaundice became intense. She improved and was apparently well in the meantime. A distinct nodule could be felt one and a half inches below the tip of the ensiform cartilage and a little to the right of the median line. The lump was small, smooth, and partially movable. A distended and movable gall bladder could be readily made out in the right hypochondriac and right lumbar regions. Operation was performed in two stages; the gall bladder was opened and washed out, and fastened to the abdominal wall. The wound required reopening in forty-eight hours for secondary hæmorrhage from the cut surface of the right rectus muscle. The patient bled at the nose and spat blood. The

wound healed by first intention. Notwithstanding this fact, the nodule was found, by needling, to be a small growth as large as a small walnut, and not a stone. The diagnosis could only be made by means of the needle, even after the abdomen was opened.

After the cholemia had disappeared an anastomosis was attempted by means of the elastic ligature. As bile did not come away in the feces, as expected after the lapse of a sufficient time to allow the ligature to cut through, a probe was passed and readily found an opening through the gall-bladder wall, but no gas or feces came through it. The little finger was passed into the gall bladder, after dilating the fistula through the abdominal wall, and the opening in the gall bladder wall could be felt. Through this a small sound, about No. 20 French, was readily passed, but no bile appeared in the feces. A little blood now began to streak the discharge of bile; this gradually increased, until after some days hæmorrhage from the gall bladder became alarming. In spite of the styptics and packing of the gall bladder with gauze, the patient died.

He said one other case had been reported by Bardenheuer, in which the elastic ligature had failed to produce the fistula. He had himself produced obstruction of the intestine of a dog after establishing anastomosis, and had found the lumen unobstructed, the anastomotic opening almost closed, and the silk ligature hanging in the interior of the bowel some weeks after. He would in future use the direct suture.

The post-mortem examination revealed the fact that the secondary manipulation had been practically extraperitoneal owing to the presence of limiting adhesions, and no signs of peritonitis were present. The fistula through the gall bladder opened in among dense adhesions just over a firm adhesion of the duodenum to the gall bladder. Any opening in the duodenum made by the elastic stitch must have healed; no trace of the stitch could be found. The hæmorrhage apparently came from the liver or the bile duct in the neighborhood of the growth.

He concluded, firstly, that the best method of producing anastomosis is direct incision and direct suture with free drainage; secondly, that it is better to divide the operation into two stages, cholecystotomy and relief of jaundice, and cholecystenterostomy at a subsequent period; thirdly, that in many cases of large stone in the common duct it is better to leave the stone *in situ*, to do cholecystotomy, and then follow it up with cholecystenterostomy by direct suture after the cholemia had disappeared.

Dr. L. H. LAIDLEY, of St. Louis, cited a case in which the principal symptom was a condition of jaundice, the tumor being readily felt underneath the thin walls of the abdomen. Operation was done, in which union was made about the duodenum and that of the gall bladder, and the parts were united by Brokaw's rings. The great amount of hæmorrhage with which he had to contend was the cause of the patient's death. He believes the hæmorrhage came from the mucous surface of the sac itself, and not from the margins of the sac.

Dr. C. A. L. REED, of Cincinnati.—This is the first time I have had demonstrated to me the existence of intracystic neoplasms. They may be very misleading and send us on a hunt for calculi that do not exist. The question of anastomosis between the gall bladder and some section or segment of the intestinal tract is one of great practical interest, and I believe that wherever it is practical to effect such an anastomosis it ought to be practised in all cases in which there is either a large calculus or considerable growth, if the two can be differentiated at this stage of the operation within the common duct. I have given some attention to the practice of anastomosis, not clinically, but experimentally, and I am satisfied it is an operation, as Dr. Ross has stated, that has come to stay. The ordinary anastomosis can be done quickly and easily, without a particle of danger, from the margin of the incision, by the Murphy button; and the nature of the device is such as to preclude the possibility of hæmorrhage, for the reason that it exercises that pressure upon the terminal vessels that will prevent the oozing.

(Dr. Reed showed the Murphy button. He exhibited three different sizes of the button as made at present.)

Dr. L. H. LAIDLEY.—I would like to ask if any of the members know of a case successfully operated upon in the human being other than those reported by Dr. Murphy.

Dr. LONGYEAR.—Dr. H. O. Walker, of this city, has had a case of intestinal anastomosis in the human being in which the use of the Murphy button was successful.

Dr. MANTON (closing the discussion):—The chief point of interest to me in this class of cases is the diagnosis. From what I have been able to ascertain from the literature of the subject, there seems to be no general symptom by which this condition of malignancy can be diagnosticated. We may have unmistakable disease of the liver present without having any trouble with ducts or gall bladder itself; so

that unless some symptom is discovered by further investigation in this class of cases, it will be exceedingly difficult for the surgeon to know when *he shall* and when *he shall not* operate.

DR. ROSS (closing the discussion).—I cannot advise the use of the elastic ligature, and I should hesitate before using the Murphy button, for the reason, it seems to me, we are introducing into the intestine a large foreign body. Dr. Laidley tells me that two cases operated on in St. Louis in which the button was used both terminated fatally. If I should be fortunate to have a case of this kind to do I should first of all open the gall bladder, drain, get rid of the condition of cholemia; second, operate by secondary operation and produce anastomosis by direct suture. I believe it will answer every purpose.

GYNÆCOLOGY IN ENGLAND.

BY W. R. PRYOR, M. D.

British Medical Journal, September 16th, 1893, gives an address by Dr. S. Pozzi on

The Conservative Treatment of Diseases of the Uterine Appendages.

From the prominence into which the essayist has lately come as an author of a work on gynæcology, an exhaustive analysis of this latest emanation is proper. No subject connected with the study of gynæcology is of such vital importance as "The Conservative Treatment of Diseases of the Uterine Appendages." But there is much confusion as to what is meant by conservatism. Here in America we consider two forms of conservatism, one which seeks to render unnecessary a grave operation, and the other embodying the conservation of tissue already the seat of disease. The first has certain limitations, indications and results, which are fairly well understood and pretty generally accepted. The other form of conservatism has been applied to a variety of procedures, some plausible, some absurd. The same division of conservative operations, and, we may add, the same lengths to which they may be carried, can be seen in the following extracts from Dr. Pozzi's essay:—

"The question of the conservative treatment of the uterine appendages is vast; it comprehends the study of all therapeutic means of operation designed to cure these organs without removing them. Now in this list we may include all methods of treatment of the uterus diseased at the same time as the tubes, which have for object the cure of the latter, by extending the cure from the uterine mucous membrane as far as the mucous membrane of the Fallopian ducts. This is what I have named 'indirect treatment of salpingitis;' this treatment includes chiefly curetting, cauterisation, and electricity. I believe all these may be useful in the first phases of acute catarrhal salpingitis, but illusive the moment that pus begins to form, or in chronic cases where the tubal walls are attacked by chronic inflammations which have thickened the walls and united the fimbriæ."

Now this is a frank statement and withal a bold one, Dr. Pozzi lumps into one class curettage, cauterisation and electricity, with like indications and similar results. The mind which can entertain such an idea must of necessity see no use in that form of conservative treatment which is so generally followed in New York. The diagnosis of acute catarrhal salpingitis may not be made. All salpingitis (other than tubercular) is due to the extension of a morbid process from the uterus. We may infer that pus cells are present in all true inflammatory processes of the tube. The treatment of acute purulent salpingitis by means of electricity and caustics may, as Dr. Pozzi says, be "but illusive." But to make such a statement regarding the effect of the modern operation of curettage and gauze packing upon a tube so inflamed, is to take a position which few here will occupy with him. In all cases of acute tubal inflammation and pre-eminently when there is the production of pus, the surgical, the first procedure before considering any other, the truly conservative operation is to thoroughly curette the uterus and provide for the rapid removal of the discharges. That such tubes will get well, that fimbriæ, even adherent, will loosen, is the firm belief of some of our best men. Do not effusions of pleuritic lymph wholly disappear, do not pleuritic adhesions gradually attenuate and sever under the active movements of the chest? The pathogeny and pathology of pleuritic effusions and resultant adhesions and those of the fimbriated end of the tube are identical. Granted that old firm closure of the fimbriated end, the result of long standing tubal disease will not again open. But too many cases have been reported by careful men in which all evidences of disease have disappeared after an operation for septic or specific endometritis with a like tubal

complication. As the first and immediate result of such inflammation of the tube is the closure of the fimbriated end, that occlusion disappears also after such conservative operation, and these women conceive and go through the puerperium without trouble. Dr. Pozzi states practically that where there is septic or specific salpingitis or thickened and chronically inflamed tubal walls with united fimbriæ, curettage is illusive. And we state that many of us here in America will say he is absolutely wrong.

He condemns massage and electricity as applied directly to the tubes, and we fully agree with all he has to say against such absurd measures.

"I must speak now of a kind of conservative operation which has been proposed in cystic salpingitis in order to induce the evacuation of the liquid by dilatation of the uterus and of the ostium internum of the tubes. I am opposed to this so-called prudence, more dangerous than audacity. There is danger of provoking inflammation of the neighboring peritoneum by this manœuvre. There have been numerous accidents of this kind, some of them fatal. The end pursued is, moreover, delusive. As a matter of fact, in the immense majority of cases, the purulent, bloody, or serous collections in the tubes cannot empty themselves into the uterus when dilated, as there is an extensive obliteration of the tubes in the vicinity of the uterine cavity. All experienced surgeons will be of my opinion; thus the evacuation of the hydrosalpinx and pyosalpinx into the uterus by the dilatation of that organ is a theoretical idea, nothing more. If improvement or cure has followed dilatation, it has been due simply to antiseptic medication of the uterus at the same time. Of course, in the cases of so-called cure of pyosalpinx, hydrosalpinx, etc., there has been an error of diagnosis. It was a question, not of cystic salpingitis, but of acute rekindled salpingitis, with surrounding cedema, giving rise to tumefaction."

Dr. Pozzi takes here the stand that hydro- and pyosalpinx can not be emptied through the uterine end of the affected tube and his opinion is shared by most operators. That collections of fluid which have formed as the result of acute processes in the uterus and have done so rapidly may be evacuated by removing the swollen endometrium is a moot question. It is our belief that we have seen it happen. Masses of lymph and serous accumulations about diseased tubes are doubtless very often interpreted as tubal dilatations. The conservative curettage

in these cases of pyosalpinx to limit or cut short the peritonitis when largely due to existing disease of the endometrium, Dr. Pozzi ignores.

We quote further to show Dr. Pozzi's position relative to the conservation of diseased tubal and ovarian tissue.

"I hasten to say that I have no faith in operations performed with the hope of restoring the functions of a diseased Fallopian tube. I believe that once having been attacked by acute inflammation it has become definitely incapable of fulfilling its physiological rôle. The abdominal aperture may be reopened by detaching the agglutinant fringes, or even an artificial orifice created at the side of the normal one now obliterated, as Skutsch and Martin have done; but I believe this work to be useless, as is easily proved by the following considerations. In the first place the calibre of the Fallopian tube, momentarily re-established by catheterism, will always have a tendency to be obliterated again; also, even were the calibre to remain fixed, it would not suffice to assure the migration of the ovules. The rôle of the Fallopian tube is not that of an inert duct; this tube is essentially active; the integrity of its texture, the persistence of its vibratile epithelium, and its contractile fibres, are conditions indispensable to its function. Thus an inflammation of some duration must surely destroy or definitely paralyse these active elements.

"For these reasons I eliminate partial resection of the Fallopian tubes from the number of conservative operations. I believe that these may be attempted only when the Fallopian tube is healthy, the ostium open, and its calibre permeable. In other words, I consider partial operations justifiable for the ovary only."

Dr. Pozzi's reasons for the uselessness of these conservative procedures become merely theoretical in face of the reports of conceptions which have taken place after such conservatism. We agree with him in considering salpingotomy unwarranted whenever the tube is the seat of a purulent inflammation.

He advocates ignipuncture for the cysts of "cystic degeneration" as it is frequently called rather than resection. He ignores, and very properly we think, the resection of ovarian abscess. Strangely enough, he lays claim to priority in the performance of salpingorrhaphy, or suture of the tube to the ovarian tissue left after resection. The operation has been performed for some years in New York. Altogether too much stress is laid upon the condition of the ovary in producing symptoms. Pozzi apparently operates when he can discover nothing but cystic degeneration, with healthy tubes. Few of us here longer

regard these insignificant organs as of much surgical importance unless the seat of neoplasm or purulent inflammation. They bear their functional activity soon after birth, continue to discharge ovules after the menopause, are the seat of cystic degeneration, of neoplasm even, and all without producing symptoms. It is generally regarded here as not proper to operate for cystic or follicular degeneration alone, even though a resection be sufficient to remove the cysts.

The rest in bed, the strict attention to diet, probably had more to do with conception after these conservative operations of ignipuncture by Pozzi than had the operation. Sterility in these cases is of uterine origin not ovarian, and post-operation treatment is calculated to benefit the endometrium upon whose cytogenic function conception depends. Dr. Pozzi cannot properly cite a pregnancy as warranting his operation of ignipuncture. Simple puncture of small cysts is more precise and much more scientific than ignipuncture.

Altogether in reviewing this essay delivered in such forcible uncompromising words, we are inclined to think that Dr. Pozzi has fallen far short of expectations in his treatment of the most important question before us. For American literature he apparently cares little, as he is not influenced by our teachings and claims priority for a procedure practiced here some time. His operation of ignipuncture adds nothing to our facilities. Surely it is not conservatism to cut open a woman's belly to puncture the cyst in her ovaries.

"Again, we may have recourse to the resection of a segment of the ovary in cases of microcystic degeneration, in which the disease has left a zone of ovarian tissue intact. It is then frequently found that the whole convexity of the ovary is covered with little transparent or bluish specks, characteristic of the presence of small serous or hæmatic cysts, whilst in the region of the hilum a band of tissue exists untouched by disease. An incision can be made along this line, removing the greater part of the ovary, but preserving the base of the organ, and uniting the lips with a continuous suture of catgut. Such was my method of procedure in my first operations. I have now added a complementary manœuvre, the fixation of the ostium of the Fallopian tube upon the ovarian stump by means of a few points of suture. This salpingorrhaphy is designed to prevent the Fallopian tube from slipping away, so to speak, from the rest of the ovary, and contracting adhesions."

"Latterly I have modified my method and practised ignipuncture instead of resection."

GYNÆCOLOGY IN SCOTLAND.

BY J. D. BISSELL, M. D.

*Prolapse of the Female Urethra.*¹

BY PROF. A. R. SIMPSON.

Prolapse of the female urethra is a condition of infrequent occurrence and has received but scant notice in gynæcological text-books.

Winckel and Kleinwächter are among the few authors who have written to any extent upon this subject. The latter has found records of fifty distinct cases, besides notices of others that bring the number up to about one hundred. Of thirty-nine where the ages were given, he found twenty, equal to 51.08 per cent., occurring in children under fifteen years of age; seven, equal to 17.90 per cent., during the reproductive age from twenty-two to thirty-seven years; and twelve, equal to 31.02 per cent., in elderly women beyond the menopause, from the forty-seventh to the seventy-fifth year of life.

He thinks the designation of *prolapsus urethræ* ought strictly to be confined to those cases where the inversion of the mucous membrane begins immediately within the urethral opening: and Winckel's designation of *inversio cum prolapsu mucosæ urethræ* to those cases where the inversion begins higher up in the canal. In the former cases inversion begins with eversion of the mucous membrane bordering on the meatus. In the latter the membrane becomes loosened high up in the canal, and has to travel some distance in its inverted condition before the summit of the fold appears at the orifice and a definite prolapse occurs.

The following cases are both instances of true prolapse.

Mrs. R., æt. fifty-two. Admitted November 17th, 1892, complaining of tumor at orifice of urethra. Reached her menopause at forty-two, and had no discharge till within a fortnight ago, when as the result of a fall from a chair, she had a rather smart hæmorrhage. She is a mother of six children, and had never known a day's illness before. On inspection of the pudenda a red vascular tumor, with smooth, unbroken surface, is seen surrounding the urethral orifice: it is not tender on manipulation.

¹ Read before the Obstetrical Society of Edinburgh, May 10th, 1893.

November 24, 1892. Patient anæsthetised, and prolapsed mucosa of urethra removed by cautery. Patient was dismissed December 1, the part being well healed and the cicatrix having puckered well in.

"On microscopic examination the epithelium of the removed portion is seen to be entirely transitional. Under the general surface spaces lined with this epithelium are seen; they are sections of deep recesses in the mucosa. The sub-mucous tissue is denser than normal. Extreme vascularity characterises the connective tissue. The capillaries are dilated, and blood is effused everywhere. The small arterioles are also dilated."

Mrs. M., æt. seventy-two. Admitted March 8th, 1893, complaining of pain on passing water, which had lasted for a fortnight previous to admission; at that time blood began to flow quite freely from the pudenda. She has had five children. Labors easy and puerperia normal. On inspecting pudenda a large vascular growth is seen at the base of the vestibule. No marked tenderness on palpation.

March 9th, 1893, patient was anæsthetised and tumor removed by a Paquelin cautery. March 18, patient dismissed cured. The characteristics presented by the prolapsed mucosa were similar to those shown in the other specimen. In the first case the prolapse seems to have been the result of a fall the patient sustained when in stepping from the window-sill to a chair her feet slipped and she fell on the floor. In the second case the cause of the prolapse was evidently the presence of an urethral caruncle.

The symptoms that call attention to the condition are pain in the seat of displacement, aggravated by exercise or by evacuation of the bladder. Sometimes there is difficulty of micturition with bleeding. The diagnosis is made by inspection of the pudenda: a red growth is seen projecting from the urethra. A complete exploration sometimes requires the introduction of the sound or catheter.

There are three methods of removing these displaced tissues:

1. They may be made to slough off by strangling them with a ligature; but such a method implies a protracted cure, contradicts all the conditions of aseptic surgery, is a cause of great and prolonged pain and discomfort.

2. They may be removed at once, under an anæsthetic, with the knife or scissors; the cut edges should then be immediately brought together with sutures running in the course of the canal. Kleinwächter maintains that in the variety described as inversion with prolapse, it may be necessary first to split up the urethra to get full access to the

inverted fold; the wound in the urethral wall is easily closed. Emmet makes a button-hole opening in the urethra, through which he draws up and cuts off the redundant mucosa.

3. The removal of the redundant tissue can probably be best effected with the Paquelin knife. With the cautery knife the operation is made easy, recovery speedy without undue contraction of parts resulting.

Abstract of paper

ON LIGATURE OF THE PEDICLE IN OVARIOTOMY.

BY ALBAN DORAN, F.R.C.S.,

Surgeon to the Samaritan Free Hospital.

A case is described where the patient died of phthisis eight years after ovariectomy had been performed by the author.

Experience has justified the opinion of some of the earlier ovariectomists that the ligature is the best method for securing the pedicle. China twist silk must be used, and it must not be too thick or too thin to make a good deep groove in the pedicle when tied firmly. The simplest loop and knot are the safest. The outer border should always be secured separately whenever the pedicle is broad or short, and in long pedicles where the ovarian vessels are large.

The early union of the tissues bulging over the ligature is well known. The absorption of the ligature has been authenticated by Ballance and Edmunds, who, in a case where the patient died eighteen months after ovariectomy, discovered the knot only of the ligature, the loop having been absorbed. The gradual destruction of the silk by leucocytes getting between the fibres has been plainly demonstrated in the case of arteries. The ovarian pedicle is still better placed to allow that process to go on undisturbed.

Alleged disadvantages of the ligature are mostly due to its unskillful application, rough handling, too thick silk, or complicated knots. The pedicle of an ovary and tube removed for chronic inflammatory changes is less favorable for ligature than is the pedicle of a cystic or solid tumor of the ovary.

An analysis is given of cases quoted in text-books and elsewhere to show the supposed disadvantages of the ligature. In some, the pedicle was not that of an ovarian tumor, or the ligature was not entirely sunk in the peritoneal cavity, or was made of very thick silk.

In conclusion, evidence and experience are in favor of the ligature for general use, as the best method for securing the pedicle when ovarian tumors are removed.

This communication is based upon a specimen of the pedicle of an ovarian cyst. The patient survived eight years after I removed the tumor, her death being due to phthisis.

H. L—, aged 32, a very robust single woman, manageress of a laundry establishment in the suburbs, first came under my care in July, 1883. A large tumor distended the abdomen. On July 30th, I operated in a nursing home, removing a bulky multilocular tumor of the left ovary. The pedicle was very broad and rather short. I secured the ovarian vessels in the outer border with a No. 1 China-twist silk ligature. The centre of the pedicle was transfixed with a needle bearing No. 3 silk and tied in the usual manner; the loop was cut and the two halves crossed on one side, then each half was tied at one extremity of the pedicle. I noted that externally the base of the pedicle almost touched the sigmoid flexure, forming, in fact, one layer of its mesentery. The patient made a rapid recovery, and for seven years enjoyed her usual good health.

In May, 1890, pains in the left loin set in, and after a few months she became cachectic. In January, 1891, a swelling formed in the loin; afterwards rigors occurred. Pus appeared in the urine. On March 7th she was admitted into the Samaritan Hospital. On March 28th, after due deliberation and consultation with my colleagues, I undertook an exploratory operation, opening the abdomen by an incision along the outer border of the left rectus. Most of the tumor was made up of a mass of small intestine firmly adherent to contiguous parts and to a swelling deep back and high up in the loin, evidently the kidney. I separated the intestinal adhesions. The right kidney did not feel to me perfectly healthy. As the left kidney was in a bad position for removal, and the patient's general health unsatisfactory, I did not think it right to attempt the extirpation of the affected organ. Had the tumor been a cystic kidney, suppurating or otherwise, and not, as in this case, surrounded by structures in a state of chronic inflammation, I should have removed it. As it proved afterwards, the patient was even less fit to bear an operation of extreme severity than I expected.

Before closing the wound, I examined the left lumbar region and iliac fossa and pelvis. The ureter was not dilated. The stump of the ovarian pedicle was healthy, and the structures around it, as well as the tissues along the course of the ureter, were free from any sign of inflammatory thickening. I introduced a drainage-tube. It was removed in forty-three hours, as only a small amount of pale serum came away. A purulent discharge, however, escaped from the wound on the ninth day, and continued for several weeks. Pus came away in the urine; symptoms of phthisis, however, set in, and the patient was sent to St. Bartholomew's Hospital, where she came under the care of my friend Dr. Samuel West.

The patient sank rapidly after her removal to St. Bartholomew's Hospital. The whole left lung was involved, and tubercle bacilli were found in the sputum. On July 14th she died, forty years of age. Mr. C. Hubert Roberts, house physician, kindly informed me of the course of the case, and took care to ensure the preservation of the internal organs. The left kidney, the seat of tubercular disease, was suppurating. The right was not actively diseased.

The evidence of the necropsy tended to prove that the renal disease had nothing to do with pedicle, any more than it could be said that the state of the pedicle caused phthisis. As, however, the diseased kidney was on the same side as the ligatured pedicle, I thought it right to give the negative evidence as above detailed. There was no obstruction of the ureter nor thickening of the connective tissue along the course of that duct, and no true hydronephrosis or pyonephrosis. The kidney disease was tubercular. No evidence of tubercle could be found in the uterus, tubes, or ovaries.

I examined the internal organs in the museum of St. Bartholomew's Hospital, where the pedicle is now preserved. The uterus was two inches long, the cervix short and thick, the os circular. The right ovary measured an inch and a quarter in length, and three-quarters of an inch in vertical measurement. The surface was deeply corrugated. One dropsical follicle protruded from its posterior aspect. On section, its interior appeared dull red and almost devoid of follicles, but speckled at certain points with white spots representing old corpora lutea. The patient had ceased to menstruate after February 13th, 1891. The tube was of senile type, long and thin, with ill-developed fimbriæ.

The pedicle was reduced to a hard tuberosity, close to the left cornu of uterus. It was barely over a quarter of an inch broad, and

no trace of the ligature could be found on snipping into its substance. It consisted of the stump of the left Fallopian tube, and a portion of broad ligament somewhat condensed, yet capable of being frayed out to the extent of half an inch. The hard tissue in the tuberosity was limited to the tube.

The sigmoid flexure lay close to the pedicle, being connected with the uterus by a peritoneal band not half an inch long when stretched. The tuberosity representing the stump of the pedicle lay, in fact, on the free edge of this band.

There can be little doubt that the best way to secure the pedicle of an ovarian tumor is by the ligature. Certain points must always be observed. Silk should be used, China-twist is preferable to floss silk, and the ligature should never be too thick. No. 4 is thick enough for a very stout pedicle; No. 3 is, as a rule, sufficient. A strong silk of moderate thickness makes a deep groove in the pedicle if tied firmly, and it is safest to bring its ends round a second time. A thick ligature does not make so good a groove whether its ends be brought round only once or twice. The outer border of the pedicle, including the pampiniform plexus and ovarian artery, should be secured separately with No. 1 or No. 2 silk whenever the pedicle is broad or short, and also in long pedicles when the vessels in question are seen to be large. I know of two cases where, in the practice of able operators, slipping of the pedicle and fatal hæmorrhage followed neglect of this precaution, and other cases of this accident have been reported to me. Sloughing of the ligatured pedicle is extremely rare.

The changes which the pedicle and the ligature undergo are subjects of high interest. All authorities seem agreed as to the effects of ligature on the pedicle. The tissues of the pedicle, consisting nearly always of broad ligament, bulge over the groove made by the ligature and thus come in contact with one another. Hence the importance of using a silk neither too thick nor too thin to make a good groove. Lymph is thrown out, it organizes, and the tissues thus become histologically continuous, the ligature being entirely covered. The vitality of the distal part of the stump is easily maintained, whilst these changes are being established, by the warm and uniform temperature of the interior of the abdomen and the protection of the soft, smooth-walled intestines.

This union of the bulging tissues of the stump has long been recognised. Spiegelberg, Waldeyer, Masslowsky, Bantock, and myself have demonstrated it. I have prepared several specimens, now in

the Museum of the Royal College of Surgeons (Pathol. Series, Nos. 4558—60). It is also seen in a specimen in the St. Thomas's Hospital Museum (F.F. 48), and I believe that similar examples are to be found in other collections. I have already discussed the subject at length elsewhere.

The changes in the pedicle, as just described, are, I believe, universally admitted. There can be little doubt that the ligature is nearly always absorbed, but surgeons are not so ready to admit this theory. Spiegelberg and Waldeyer first demonstrated by experiments on the cornua uteri of animals that leucocytes force their way between the fibres and the silk, and thus break up the ligature. Yet many surgeons believe that the ligature simply becomes encapsuled, or eats its way out of the pedicle. Experience shows that the leucocyte theory is quite correct.

Ballance and Edmunds note that "in two post-mortem examinations on cases in which ovariectomy had been performed some considerable time previously, we had the opportunity of looking for the silk ligatures which had been used for the peduncles; one case was eighteen months after operation, and here only the knot of the ligature could be found;¹ the other was three years after operation, and in this case no trace of the silk ligature was discoverable."

The authors describe Dent's case, where kangaroo-tendon ligatures were used for the carotid and subclavian arteries; the patient died on the tenth day. The ligatures were examined under the microscope. The tendon was infiltrated with small round granulation-cells, which had penetrated into the interfascicular spaces and tended to split the tendon into longitudinal bands.

The invasion of silk as well as tendon ligatures by leucocytes has been demonstrated not only by Spiegelberg, Waldeyer and Masslowsky, but also, in the case of arteries, by Ballance and Edmunds. The ovarian pedicle is better placed, being more protected than most arteries, to allow of this salutary process of absorption of its ligature. Mr. Langton has used floss silk for arteries, and the cells get between the loose fibres of that material more speedily than they penetrate China-twist, which is employed for ovarian pedicles. Thomson, of Dorpat, in the course of experiments made with different ligatures to determine which were best for suture of the uterus in Cæsarean sec-

¹ This is a conclusive proof of absorption, however the absorption may be effected. Had the ligature eaten its way through the pedicle, the loop, if found, would have been entire and unabsorbed.

tion, found that carbolised catgut was absorbed in ten days, excepting the loop of the ligature, hence it is dangerous. Chromic cat-gut and silkworm gut remained quite unchanged at the end of sixty-four days. Silk was partly absorbed in fifty and entirely absorbed in sixty-four days, a safe period for absorption. In the St. Thomas's Hospital specimen, F.F. 48, already noted, "the peduncle had been tied nine months previously with silk which is now partly absorbed." In fact, there can be no doubt that absorption of the silk is the usual and the normal change in ovarian pedicles.

There can be little doubt as to what kind of silk is the best for the ovarian pedicles. China-twist has stood the test of experience. Mr. Treves observes that "this material has a disposition to kink and to curl up even after it has been soaked in water for some time." He is speaking, however, of its employment for sutures. When applied to the pedicle, it can hardly get so dry as when used for the union of external wounds. Plaited or braided silk, as far as ligature of the pedicle is concerned, seems to possess no special advantages, and the same may be said of floss silk which, though it allows of the free entrance of leucocytes between its fibrils, as Mr. Langton has shown, is more liable than China twist to slip.

In the above remarks on the manner in which the ligature is absorbed, it is taken for granted that the silk has been skilfully applied and, above all that it is clean. A silk containing septic material may readily set up very serious pathological changes.

The real or alleged disadvantages of the ligature must now be discussed. In "Tumors of the Ovary" I showed that as far as the evidence of necropsies can guide us, the cause of death after ovariectomy lies, as a rule, elsewhere than in the pedicle. When the pedicle is the seat of a change to which a patient's death may fairly be attributed, that change is usually a slough of the base of a cyst, or a piece of colloid material left behind, or an abscess, or plugging of large veins due to damage of the parts by the transfixing-needle or ligature. The sloughing of a great piece of tissue left on the distal side, a piece too extensive to get early and free nutrition from the proximal side, will place the patient in extreme peril.

Such conditions are hardly ever seen in these days. The cyst-wall must be got away entire, or if the base remain on the surface of the stump, it must be trimmed away; the same rule applies to colloid or sarcomatous material. The surgeon must avoid transfixing a vein and must not leave too much tissue on the distal side of a ligature. Knowl-

edge of the parts and confidence in the justifiability of ovariectomy permit of gentler manipulation, for it is the ignorant hand that is rough. Hence the pedicle is less tightly grasped, less pinched and pulled about than it used to be. I know of one case where it was probably the rough handling of the surgeon who had not performed ovariectomy before, that caused a free parametric exudation in the broad ligament below the pedicle. The pedicle is a tender thing and must not be bruised, nor is there any difficulty in avoiding all bruising during the necessary manipulations.

Above all, the surgeon must avoid thick silk. Dr. Playfair's case, recently exhibited before the Society, where a very thick ligature in three loops had been applied to the pedicle of a diseased ovary and tube, and discharged, is not strictly an example of ligatured ovarian pedicle. The tissues of the pedicle of a tumor of the ovary are usually healthy, but the pedicle of old inflamed appendages is always made up of diseased, if not of actively inflamed or even suppurating tissues. Yet in the case of inflammatory disease of the ovary and tube, the ligature still seems the best form of treatment. No other method of securing the pedicle can overcome the disadvantages of leaving diseased tissue behind. Here it is more than ever important not to use thick silk. In Dr. Playfair's case, the operator admitted that no thinner silk was at hand when he operated; so he had no choice but to use the stout material figured in Dr. Playfair's paper.

In Dr. Milne Chapman's case, a silk ligature was discharged from the lower angle of an ovariectomy-wound nine weeks after operation. The patient was rather a sickly woman, aged sixty-four. More silk than usual had been required to secure the pedicle, "hence perhaps the passing of the ligature." No antiseptic had been used either during or after the operation, and no rise of temperature had occurred. No notice of the thickness of the ligature is given in the original report. In reply to a letter which I addressed to him, Dr. Chapman kindly gave me the desired information. "I used," he wrote, "too much silk and silk of too great thickness, No. 5 braided, and used two ligatures. I had been troubled before by breaking ligatures, and also in the previous case to the one referred to, by the edge of the pedicle slipping out of one loop of the Staffordshire knot which necessitated my removing the ligature and applying another." Most assuredly the safe ligation of the pedicle is the first thing to be considered. The best way to avoid snapping of silk ligatures (it being taken for granted that the material is in good order before use) is to avoid fancy knots, in

which the thread winds repeatedly in and out, offering many points where one portion frays another as the ligature is drawn tight. Lastly, in Dr. Chapman's case the discharge of the ligature might, after all, have been the result, not the cause, of some complication set up by other agencies.

Drs. J. H. Thompson and Pandolfi's case where the ligature ulcerated into the bladder¹ must be set aside, as it was not an instance of complete intra-peritoneal ligature. The ends of the threads were left outside the wound and cut short at the end of eleven weeks.

The case of discharged ligatures in M. Quenu's case reported by M. Terrier must also be rejected. The operation was not ovariectomy but removal of the uterus for fibroid disease together with the ovaries which were the seat of proliferous tumors. A large number of ligatures was discharged through the vagina, after the formation of abscess. Hence this case cannot be quoted by objectors to ligature of ovarian pedicles. Dr. W. Goodell has inadvertently included it under his notes of cases discharged ovarian pedicle ligatures.

Dr. W. Goodell notes that in two cases of his own the ligature was discharged "without doing harm," but he gives no particulars. Hegar's remarkable case of discharge of a ligatured stump through the rectum has already been referred to in my own writings.

Dr. Keith prefers the cautery to the ligature, but in the cases in this distinguished authority's experience, quoted by Goodell, catgut-ligatures were used, not silk, and in one, Dr. Keith states, "some thick catgut-ligatures had been used to a very thick omentum. Several of the knots came away through the wound, and after weeks of horrible suffering from cystitis, a thick knot of catgut, with the loop but little absorbed, was passed by the urethra." Hence the cases do not precisely coincide with the subject of this communication, in which it is assumed that silk is used for the ligature. Thomson of Dorpat's experiment, already quoted, shows its superiority to catgut.

Dr. William Taylor draws a gloomy picture of the prospects of a patient who bears a ligatured pedicle. He gives carefully prepared details of a case where he believes that malignant disease was set up by the irritation of the ligature. In certain points it bears a resemblance to my own case, described at the beginning of this memoir.

¹ As in Dr. Haig Ferguson's case ("Edinburgh Medical Journal," March, 1893, p. 863), "Phosphatic calculi passed *per urethram*, in which the nucleus of the largest was formed by 'a silk ligature.'" The ovaries and tubes had been removed a year before, for inflammatory mischief. No note is made of the thickness of the silk, or the knot. See observations on Dr. Playfair's case.

In 1883 a surgeon, with whom Dr. Taylor was personally acquainted, removed a left ovarian tumor. The cautery and no ligature, Dr. Taylor informs me, was applied to the pedicle. The right ovary appeared healthy, but it was removed lest it should become the seat of future disease. The surgeon "applied a double silk ligature, removed the ovary, and allowed the ligatured stump to fall back into the abdomen." Dr. Taylor further informs me that no note has been kept of the size of the silk used in the ligature. Three years later the patient suffered from an offensive watery discharge from the uterus, which lasted for two years. Five years after the operation the right foot and leg became very swollen, indeed, almost gangrenous. Dr. Taylor believed that the open remnant of Fallopian tube which had previously allowed its discharges to escape into the uterus had become occluded. This complication has set up a pelvic abscess which retarded the circulation. The leg recovered. In September, 1889, a large tumor was found reaching from the liver to the right iliac space. Suppression of urine occurred and proved fatal.

At the necropsy "the pedicle on the left side presented no signs of prolonged irritation, there being, in fact, a marked absence of thickening either in or around it. The right pedicle had, on the other hand, been the seat of much and prolonged irritation, the evidence of this being found in the presence of dense fibrous adhesions in its neighborhood, especially posteriorly where the pedicle was incorporated with the parts in front of the sacrum and adjoining pelvis. On the uterine side of what looked like the seat of ligature there was a four-chambered cyst, about the size of a small walnut, which contained purulent-looking material. The bladder and parts in front of the uterus appeared normal, but behind the uterus and in the pelvis round the rectum there was much fibroid thickening; the thickening extending to and involving the walls of the rectum. This condition, extending upwards along the connective tissues in front of the spine, produced a like thickening and induration in them, and in it both ureters were embedded, the left being so surrounded by this new tissue as to lead to its complete blocking, while the right was not so completely blocked." . . . There was advanced hydronephrosis in the left kidney. The right kidney was large and swollen. The new tissue involved the head of the pancreas and the suprarenal capsules. The liver contained whitish malignant nodules.

Under the microscope the new tissue was found to be chiefly fibrous, but it included an adenomatous structure, suggesting and in

parts closely resembling proliferous cysto-adenoma of the ovary. In the liver the structure of the nodules was more that of an ordinary carcinoma.

Though suspending judgment Dr. W. Taylor concludes: "Meanwhile the opinion may be expressed that the irritation round the ligature appeared to be the starting point of an irritation (*sic*) which acquired, if it did not originally possess, malignant characters, and led to the condition briefly sketched in this report."

Dr. Taylor further informs me that, about two years since, the sister of this patient had one ovary removed in the Colonies. Returning to England she bore a healthy child. After convalescence was fairly established, she again turned ill and died in a few weeks. The cause of death was obscure, and there was no necropsy. Dr. Taylor does not know whether the ligature or the cautery was applied. The published case requires some comment. In my own, as in Dr. Taylor's there was kidney disease on the side where laid the pedicle. But there was no obstruction of the ureter and no thickening of the tissues along the ureter, or even in the immediate neighborhood of the pedicle. The renal disease was tuberculosis and corresponded to the state of the lungs, and there was no tubercule in the pelvis. Again, in my case, there was no new growth.

In Dr. Taylor's case, on the other hand, both ureters were obstructed and both kidneys diseased. The renal disease, which proved fatal, was caused, at least in part, by the blocking of the ureters. The chief point to be decided is the nature of the new tissue which blocked the ureters. Firstly, there was a four-chambered suppurating cyst on the uterine side of the seat of ligature. Secondly, the new tissue had spread far and wide and closely resembled "proliferous cysto-adenoma of the ovary," or even, in certain parts, "ordinary carcinoma."

It is hard to see how the ligature could develop "a four-chambered cyst about the size of a small walnut." This cyst and the malignant or semi-malignant growth which developed so widely in the abdomen, suggest simple recurrence in the stump of the right ovary of the disease which attacked the left ovary; recurrence of the new growth after a type nearer to malignancy than that of the first tumor. Induration produced by a ligature is simply the well-known hardness of parametritis. But malignant degeneration of parametritic deposit is almost if not quite unknown. In short, the theory that the evil termination of this case was due to the ligature, must remain very doubtful. If the ligature did set up malignant disease, the complication is, at the worst,

extremely rare, and can hardly influence the operator in his choice of a means of securing the pedicle.

Drs. Thomas and Skene Keith remain the great advocates of the cautery. "The cautery," Dr. Skene Keith observes in an article published in April, 1892, "has still advantages over the ligature, the chief one being that if there be bleeding it will occur at once, and not, as is the case with the ligature, some time after the abdomen has been closed. When the pedicle is specially broad, the cautery does admirably. On the other hand, when thin and easily compressible, the ligature is as safe, and perhaps somewhat more easily applied." Baker Brown's clamp remains, in Dr. S. Keith's opinion, the best instrument for cauterisation. Dr. Keith admits that he has personally had greater experience of the ligature than of the cautery. He adds that he will probably use the cautery more in future, "employing the ligature only for slender pedicles, and also, of course, for cases requiring enucleation, in these latter, it not being necessary to treat, *en masse*, large portions of tissue."

In his advocacy of the thinnest possible ligature, most operators will agree with Dr. S. Keith. "The ligature of silk ought to be just so thick as to withstand the strain the operator can put upon it; there is not any advantage in having it thicker." He rightly recommends simplicity in the form of knot, and the manner in which it is tied; I referred to this subject in relation to Dr. Chapman's case. Dr. Keith's observation that the bleeding will occur at once, in the case of the cautery, often applies to the ligature, that is to say, if the pedicle be carefully examined after the tumor has been cut away, the operator can usually detect if the silk is getting loose. In a specially broad pedicle, the ligature is not always difficult of application. The separate securing of the ovarian vessels is the great safeguard. It must be observed that Dr. Keith bases his preference for the cautery on the question of hæmorrhage, rather than on the risk of late complications around the stump. The experience of the Samaritan Hospital shows that the danger of hæmorrhage after ligature is very slight, and that, with certain precautions, it may be practically avoided altogether.

Hence we must conclude that the disadvantages of the ligature are but trifling, for whilst pathology shows that it produces rapid changes in the pedicle by which that structure is reduced to a mere knob of tissue and the silk itself absorbed, the alleged bad results can mostly be referred to certain avoidable errors in this method of treatment. I have here shown that many cases which have been quoted as

evidence against the ligature are either not examples of complete intra-peritoneal ligature of ovarian pedicles, or are too meagrely reported to be of value, or are of doubtful interpretation. The ligature is the favorite appliance for the ovarian pedicle, and experience has justified that favor.

ITEMS OF INTEREST.

The Best Nutritive Enema. Useful After Laparotomy.—Ewald, as a result of experiments, found that eggs, even though not peptonized, were to a considerable extent, absorbed by the rectal mucous membrane. According to the *Mercure Medical* for April 1st, Huber, of Zurich, has recently repeated Ewald's experiments in Professor Eichorst's clinic, and announces that the absorption of raw eggs is greatly aided by the addition of common salt.

The salt is well borne, and causes, as a rule, no irritation of the bowel. He considers that eggs beaten up with salt, in proportion of fifteen grains to each egg, are the best for nutritive enema. His method of procedure is as follows: Two or three eggs are taken, and thirty to forty-five grains of salt are added. They are slowly injected by means of a soft rubber tube, carried as high up the bowel as possible. Three such enemata are given daily. An hour before each enema the rectum is cleaned out by means of a large injection of warm water.—*Med. and Surg. Reporter.*

The Best Method of Sterilizing Hard and Soft Rubber Instruments.—Lannelongue (Gaz. Hebdomadaire, 1892,) recommends for the sterilizing of hard and soft rubber instruments, subjecting them to the fumes of quicksilver. The instruments are rolled in flannel impregnated with mercury and placed in closed vessels. By a simple test you can demonstrate that the space becomes filled with fumes of quicksilver. The bacteriological examinations show that after a very short time the instruments are thoroughly aseptic. As a lubricant, the author is in the habit of using olive oil; a few globules of the quicksilver are kept on the bottom to keep the oil sterile. Since these measures have been adopted the author has had the best results.—*Universal Medical Magazine.*

The American Association of Obstetricians and Gynæcologists holds its next meeting in Detroit, June 1st, 2nd, and 3rd. Dr. L. S. McMurtry, of Louisville, is President. The Detroit members of the Association will do their part in making the meeting a success.

Infanticide.—A singular method of infanticide was reported at a meeting of the Paris Medico-Legal Society. An infant of five months died without having shown any symptoms of previous disease. Nevertheless suspicion was aroused and the body exhumed some sixteen months after burial. No traces of poison were discovered, but the intestines were found to contain some eight pieces of a blackish grey substance which completely blocked the passage. Careful examination showed that these pieces were sponge, and Professor Caseneuve gave it as his opinion that they were administered to the child for the purpose of killing it. This opinion was founded partly upon the fact that the pieces of sponge presented a cut surface, and also upon the knowledge that in certain parts of the country the custom prevails of killing stray dogs by placing in their way pieces of sponge soaked in grease, which when swallowed swell up inside of the intestines and so cause death. The jury accepted this view and brought in a verdict of guilty.—*Northwestern Lancet.*

Penalties for Abortion.—As is well known, in England and in Ireland the punishment is penal servitude for life, or for any less term, or imprisonment; whilst if the mother of the child should die in consequence of this unlawful act the crime becomes constructive or legal murder. In 1875 Alfred Thomas Heap, a Manchester abortionist, was convicted of the murder of a woman. He had used a Manchester spindle, with which he had transfixed the gravid uterus. He was found guilty, but was recommended to mercy by the jury. As, however, they were unaware that he had already served five years, penal servitude for procuring abortion the recommendation was disregarded and he was executed. Since then there have been many convictions and heavy sentences, but still the crime goes on. In Scotland the punishment is arbitrary; in France, Spain, the German Empire, Austria, Hungary, Italy, Russia, Norway, Sweden and Denmark—in short, throughout the whole of Europe—the crime is punished with imprisonment for from six months to twenty years or for life. In Sweden the penalty is death if the mother dies, and in Russia the mother, if a consenting party, may be exiled to Siberia; in the Dominion of Canada the penalty is imprisonment for life; in Nova

Scotia, Quebec, Ontario, British Columbia and in Prince Edward Island it varies from imprisonment for two years to for life; in New Brunswick the penalty is death; in Australia and New Zealand the punishment is very severe, ranging from two years' imprisonment to penal servitude for life; in the United States it is punished with fines ranging from one hundred to five thousand dollars, with imprisonment for long periods and with death; so that in all parts of the civilized world this crime is regarded as a grave one and is punished with more or less severity. Every medical practitioner who may have the opportunity of doing so should aid in bringing to justice the miscreants, both male and female; who live and thrive on this abominable trade, too often at the risk of the lives of the unhappy women who resort to them.—*Lancet*.

Ice in Phlegmasia Alba Dolens.—Dr. John A. Miller (*Pacific Med. Journal*), in treating on the subject of "milk leg," speaks highly of the efficacy of the cold treatment of the disease. He first used it in 1886, and since then has used it in six cases, with uniform and decided success. The procedure was in the following manner: An ordinary large towel was dipped into iced water, wrung out and clapped around the affected limb; a heavy flannel roller bandage was then applied from the toes upward to the groin. On the most painful parts, like the inner aspect of the thigh, the popliteal region and the calf of the leg, were laid rubber bags filled with ice. These were kept in place by a circular binder, independent and outside of the roller bandage. The patient was a little shocked when the cold towel was first applied, but the unpleasantness was only momentary, and then the reaction brought ease and comfort. She desired the ice bags to be renewed quite often at first, as she claimed they relieved the pain, as anything else had never done before. The pain was entirely controlled by the cold. The temperature dropped from 103° to 100° the next day, and the patient commenced to improve, which continued uninterruptedly. The towel was freshly dipped from four to six times in the twenty-four hours. As soon as the patient experienced relief, she was quite anxious to endure the temporary chill from a fresh compress, because the limb felt always better for it afterward; the towels soon became dry and hot and this gave rise to painful symptoms again.—*St. Louis Medical and Surgical Journal*.

The Chair of Midwifery at Belfast.—Dr. John W. Byers, M. A., has been appointed by the Viceroy Professor of Midwifery and Diseases of Women and Children in Queen's College, Belfast, in the room of the

late Professor Dill. Dr. Byers, who received his medical education at Queen's College, Belfast, graduated M. D. in the Queen's University in 1878, and after a residence for some time in London, where he became a member of the Royal College of Surgeons, he was appointed Physician to the Hospital for Sick Children, Belfast, in 1879. In 1882 he was in charge of the newly formed special department for the diseases of women of the Royal Hospital, Belfast, and has since had continuous experience in teaching. His name has become widely known by numerous excellent contributions on obstetrics and gynæcology, and he has been for many years the Active Honorary Secretary of the North of Ireland Branch of the British Medical Association. Our Belfast correspondent writes: According to general expectation, Dr. John W. Byers has been appointed to the Chair of Midwifery in the Queen's College, Belfast. The appointment is one which will command the entire approval of the medical profession in Belfast and the north of Ireland, and will redound to the advantage of the Queen's College. Dr. Byers's well-known abilities as a teacher and writer, his eminence as a practitioner, and his long devotion to obstetrics and gynæcology have marked him out as preeminently fitted for the vacant chair.—*British Medical Journal*.

OBITUARY.

We learn with regret of the death of Dr. Graily Hewitt, the distinguished Professor of Obstetrics and Diseases of Women in the University Medical College, London. Dr. Hewitt had made many important contributions to the literature of his special branch of medicine and surgery, and he enjoyed in a peculiar degree a wide personal popularity. His principal work was his "Diseases of Women," which was for many years one of the most popular text-books on this subject. Among other valuable contributions to the literature of obstetric medicine may be mentioned "Uncontrollable Vomiting of Pregnancy," "Clinical Notes on Sterility," "Nutrition the Basis of Treatment in Disease," and several papers on Displacements and Flexions of the Uterus.—*Atlanta Med. and Surg. Jour.*, Oct. '93.

Death of the "Father of Ovariectomy" in England.—Whilst the credit of the operation of ovariectomy has been conceded to Ephraim McDowell, of Kentucky, the credit of introducing and popularizing this procedure in Europe has been awarded to Mr. Charles Clay, of

Manchester, England. The death of this remarkable man, at the advanced age of ninety-two, took place at Poulton-de-Fylde, England, on September 19th.

Few men in the medical profession have lived so long and to so useful a purpose as Mr. Clay. The service he rendered to abdominal surgery will survive long after his noted personality has been forgotten. In every sense he was possessed of a strong and vigorous character which impressed itself upon every phase of work which engaged his attention. In September, 1842, whilst engaged in a large general practice, Mr. Clay performed his first operation of ovariectomy, removing a growth weighing thirty-six pounds. The patient made a prompt recovery. Following very closely upon this case he operated in fourteen more cases with a similar result.

He had seen Lizars operate in 1823, but he claimed that he was the first surgeon in Europe who had operated by the large incision. Up to 1857 he had operated on 395 cases with a mortality a little over 25 per cent. Sir Spencer Wells began his career in 1857, after having witnessed an operation performed by Mr. Clay. Mr. Clay at that day was ahead of all other surgeons in this field and he had placed the operation upon the footing it has since occupied.

In 1845 he performed with success the extirpation of an entire fibroid uterus and hence was in the lead of all other operators. His claim to the title of "Father to Ovariectomy" was conceded to him by Mr. Tait and others.

Apart from his great work as a surgeon, Mr. Clay was an authority in geology, archæology and numismatics, and was the author of a large number of books and pamphlets on various subjects. During his entire life he was a vigorous and incessant worker. He referred to his life's work in the following language: "Some men have got baronetcies, some wealth, some positions at court, but I have got peace of mind." These words were characteristic of a man who led an active, useful life, singularly exempt from affectation and self-esteem, and noted for its earnestness and simplicity of purpose. That he should have reached a ripe old age possessed of every faculty, interested in medical and general topics and devoted to the pleasures of his garden, is an illustration of the fact that the most earnest and serious duties do not forbid, even to the busiest of men, the pursuit of studies and avocations which are conducive to long life and rational enjoyments.

The life of such a man as Charles Clay is worthy of the most careful study.

THE NEW YORK OBSTETRICAL SOCIETY,

126 WEST 48TH STREET, NEW YORK.

DEAR SIRs:—I beg to send you the following “news item,” for your journal for announcement in your next issue.

At the annual meeting of The New York Obstetrical Society, held Tuesday evening, October 17th, 1893, the following were elected officers for 1893-4:

Charles Jewett, M. D., President; Egbert H. Grandin, M. D., First Vice-President; George M. Edebohls, M. D., Second Vice-President; *Arthur M. Jacobus, M. D., Recording Secretary; *J. Riddle Goffe, M. D., Assistant Recording Secretary; Augustus H. Buckmaster, M. D., Corresponding Secretary; *J. Lee Morrill, M. D., Treasurer; *George C. Freeborn, M. D., Pathologist.

Several amendments to the By-laws were adopted, among them, the following, which may be of general interest:

“Candidates for membership in the Society shall present a paper on some topic pertaining to Obstetrics, Gynæcology or Pædiatrics. The paper, if satisfactory to the ‘Executive Committee,’ shall entitle the candidate to be voted on by the Society, due notice having been given a fortnight in advance, the said paper shall become the property of the Society.”

Trusting the foregoing may be of interest to the readers of the Journal. I remain Yours very truly,

ARTHUR M. JACOBUS, Recording Secretary.

*Re-elected.

ERRATA.

In the October number under the head of “Gynæcology in Scotland” read “Riol” instead of “Rivè.” The words “of the ovary” in the line should be omitted. For “utero-posteriorly” read “antero-posteriorly” and for “return” read “uterus.”

THE
NEW YORK JOURNAL
OF
GYNÆCOLOGY AND OBSTETRICS.

DECEMBER, 1893.

HYSTERECTOMY (SUPRA-PUBIC) FOR SALPINGITIS
AND OVARITIS.¹

BY WILLIAM M. POLK, M. D.

It is my purpose in this paper to bring before the Society the advantages connected with the removal of the entire uterus when it is necessary to remove the appendages. This radical step is familiar to you chiefly through the writings and work of Ségond of Paris who has advocated this procedure in 'all cases of diseased appendages. As I understand, he recommends the operation in every case where other surgeons now content themselves with the simpler process of mere removal of the appendages.

The position which I hold upon the latter question places me, as you well know, in antagonism to the one more generally held. For I claim that while operation in these cases is necessary, yet the degree of operative interference should not always extend to complete removal or in some cases, even to partial removal, as for instance in simple adhesions (See Trans. of The Am. Gyn. Society page 182, vol. xiii, or NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS, August, 1893).

It is evident, therefore, that I do not accept Ségond's proposal in whole, because by so doing, one necessarily abandons all idea of conservative surgery in dealing with diseased appendages. Conditions of disease, which according to my beliefs, may be reduced by operation

¹ Read before The New York Obstetrical Society October 3d, 1893.

to a status in keeping with health and usefulness, are by his plan condemned to sacrifice, his proposal in this particular antagonizing my proposals in the same degree as do most operators of the present day—who having diseased appendages before them see no better way of dealing with them than amputation.

In presenting the subject propounded in the title of this paper it is necessary to subdivide the question as follows :

1st. Shall those of us who repudiate “conservative” operations upon the appendages, content ourselves with mere amputation, or shall we extend the operation to the removal of the uterus as well?

2nd. Shall those of us who accept “conservative” operations upon the appendages extend the principle to the uterus *when deprived of its appendages* or shall we remove the uterus when compelled to remove the appendages.

The answer to both questions can be found in the same direction and turns, First, Upon the relation of the emasculated uterus (borrowing a term applicable to the opposite sex) to the individual possessor: Second, Upon the dangers of the added operation.

As to the relation of the “emasculated” uterus to the health of the possessor we are accustomed to the belief that the enforced menopause resulting from removal of the appendages is so nearly analogous to the process instituted by nature—about forty-five—that the one may cause little more concern than the other. Extending our notice to the condition of the uterus in the two kinds of menopause we are also met with the belief that the process of atrophy in the one instance is of little more concern than the like natural process in the other.

When exceptions to this assumed rule are met with, they have been explained by the belief that they were due to the incomplete removal of either tube, or ovary, or both, or perhaps to the neglect of the appropriate treatment of the interior of the uterus at the time of operation. My observation has led me to believe that the exceptions to the assumed rule above mentioned are frequent, and they have also made me believe that these exceptions cannot be satisfactorily explained upon the ground of incompleteness of the operation for the reason that I have seen the train of conditions which mark them appear in many cases where I know removal of the appendages was complete, and where the interior of the uterus was properly treated—and again, I have seen this train of conditions persist in cases subjected to a second operation, in which the omissions of the first were fully corrected. (I refer in the last group to cases in which dilated stumps

of tubes were removed, or in which the interior of the uterus was curetted and packed with gauze).

The train of conditions to which I refer are metrorrhagia and periodical accumulations and discharges of purulent matter from the interior of the uterus; these accumulations and discharges being accompanied by pain, and reflex nervous symptoms. The duration of these conditions has been variable, extending in some cases over a period of two or three years, and in general, the further the case was removed from the period of nature's menopause, the more persistent and aggravated have been the conditions. In my field of observation, then, the relation of the "emasculated" uterus to the possessor has been in the main one of evil rather than of good.

Let me now place in contrast to this statement my observation in cases where the uterus has been removed along with the appendages. The first case was done in April, 1891,¹ and seven others have been done since, the ages of the patients being between twenty-five, the youngest, and forty-three, the oldest. The course of each one of these cases has been free from any of the above annoyances, and the reflex symptoms have been more in keeping with such as belong to nature's menopause than in any case in which the uterus was left in place. This is positive testimony as to the good coming from removal of the "emasculated" uterus.

I am aware that cases other than salpingitis should not be used as direct evidence upon the present question, but I will say that in all successful cases of hysterectomy for fibroids (thirty in number) the subsequent conditions of health bear out the observation made upon cases of complete removal for salpingitis, that is, the after-condition of such cases is better than that of cases of salpingitis in which the uterus has been left. This we consider collateral testimony as to the evil influence of the "emasculated" uterus.

I shall say nothing as to the possibility of malignant degeneration in a glandular organ like the uterus upon which premature atrophic degeneration is enforced. That carries us away from the domain of observed phenomena to that of speculative deduction, based even though it may be upon the facts of analogy.

But it is necessary to say a word concerning the relation of the organ we propose to remove to the anatomical needs of the pelvic floor, hence to the health and comfort of the possessor. We are familiar with the arguments which favor the necessity to the pelvic floor of the

See Bellevue Hospital Records.

uterus. Ideal integrity unquestionably requires the retention of organs which maintain nature's ideal, but when this is altered, as it undoubtedly is in the case of the uterus after removal of the appendages, it becomes at once an open question as to how far such an organ is a necessity.

In the proper removal of the appendages¹ the ovarian vessels, which serve as feeders to the upper part of the broad ligaments and the corresponding parts of the uterus, are destroyed, and while collateral circulation compensates to some extent for this loss yet it is insufficient to maintain even that integrity of these structures which is retained after nature's menopause. The body of the uterus in such cases becomes an inert wedge fastened in an opening in the pelvic floor through which it already in part protrudes. No doubt all of us have had cases in which after the maiming in question, sagging of the uterus in the vagina has occurred. This fact, no matter whether the theory of its production be the correct one or not, disproves the statement that the retention of the "emasculated" organ is essential to the proper function of the pelvic floor.

But we have a better answer to the affirmation in the cases in which the complete removal of the organ has been resorted to for fibroid tumors. The pelvic floor in all of my cases operated upon one year and two years ago is as well placed as in any case of complete removal of the appendages I have done, and better than in some of them. This statement makes it unnecessary to enter now upon an argument touching the effects upon the pelvic floor of ligation of the uterine vessels, which complete removal of the uterus necessitates. But it may not be amiss to point out that the span to be provided for becomes an extremely limited one by proper approximation of the tissues containing the severed vessels, and moreover, this tissue is easily provided for by collateral circulation from the vagina so that there is abundant ground for the assertion that the cicatrix which takes the place of the cervix in the pelvic floor is as good a support if not better than the cervix capped by the crippled uterus. I should say, then, that the uterus after removal of the appendages is not a necessity to the pelvic floor, hence, not necessary to the health and comfort of the individual: Query number one can then be answered as follows:

¹ Proper removal of the appendages means that the tubes should not be merely tied and cut off, but that they should be dissected out in their entirety, up to their connection at the uterus. While this requires some additional time for evident reasons, the procedure is greatly superior to the original method of tying and amputation.

The uterus which is deprived of its appendages is not only useless to the individual but it is a source of positive evil.

Query number two relates to the added dangers of the operation proposed. The only answer that can be given is the result of the operation. In spite of the fact that it is a more serious operation than mere amputation of the appendages, the results so far have been about as good in the one operation as in the other. This, if I mistake not, is especially the case with vaginal hysterectomy for salpingitis, and I believe that with the aid of the Trendelenburg position a like statement can be made of the supra-pubic method. I have performed the operation by this latter method seven times and all the cases did well. The first case was operated upon in January 1892, and was reported to the society February 16, 1892.¹

Here again it is proper to introduce for comparison the results obtained in complete removal of the uterus for fibroids and conditions other than malignant. Excluding a case on my list which was operated upon by the use of clamps introduced from below and confining the comparison to cases operated upon by the method of Freund, which is the one applicable to all cases of supra-pubic hysterectomy, I can state that out of thirty cases of hysterectomy for fibroid I have had two deaths; of seven for prolapse none; and of seven for salpingitis, none; making a total of forty-four cases of supra-pubic hysterectomy with two deaths. The Trendelenburg posture is the key to this success. It is idle to maintain that the removal of the uterus along with the appendages should be resorted to in every case, for the reason that while it is the ideal procedure, it must be subject to the rule which pertains in all surgical operations, namely, the condition of the patient. Should this forbid the complete operation, then the incomplete one should be substituted, for it will at least meet the urgent danger.

The answer then to query number two is that the dangers of the operation are insufficient to forbid its application in the usual case of salpingitis.

We find then, first, That with the removal of the appendages the uterus becomes a useless, vexatious and perhaps a dangerous organ; Second, That the vital conditions of the patient being such as are usually presented in case of salpingitis, the dangers attending its removal are not sufficient to forbid this step. Accepting these statements as a working basis, we can say to those who repudiate conservative operations upon the appendages that complete work demands the

¹New York JOURNAL OF GYNÆCOLOGY AND OBSTETRICS, 1893, Vol. III, No. 5.

removal of the uterus along with the appendages ; and to those who accept conservative operations upon the appendages that when these organs are sacrificed the principles of conservatism do not apply to the uterus which then should be removed.

There is an aspect of this question of dealing with diseased appendages which should now be noticed. When one speaks to a woman of taking out the ovaries, she may contemplate the sacrifice with feelings of regret, but when one speaks of taking out the uterus—apart from the question of added danger which has been dealt with above—one is met by opposition which is based upon the idea that in the uterus centers her womanhood. As a fact, we know that it centers in her ovaries, and if we were candid with ourselves we would admit that her idea is the result of our own false teaching. Until this fact can be brought home to her, we may expect greater opposition to the complete operation than to the amputation of the appendages, when in fact it should be the reverse. And again, just so long as we shirk this question, just so long will we ignore the advantages to be gained along the lines of operations which have for their primary object the saving of the ovaries. The ovary is the organ to be considered. That is, the organ about which the maintenance of woman's position revolves. It is not the uterus, and from my standpoint, I would rather sacrifice every uterus without its ovaries, than one ovary that could be saved by any known process of surgery or medicine.

Turning now to the kind of hysterectomy which should be adopted, I will say that to one repudiating "conservative" operations upon the appendages, the logical procedure may lie in vaginal hysterectomy, although I question whether so good an operation can be done from below as from above the pubis.

To one belonging to the class which accepts "conservative" operations upon the appendages, the essential procedure is supra-pubic hysterectomy, because with such operators the key to the problem is the condition of the appendages as revealed by close visual inspection, and this can only be made by approaching the organs from above. His operation is primarily in the nature of an exploratory procedure, and he expects at the outset to be able to save a part or the whole of the ovaries and at least part, and perhaps all, of both tubes. But should the condition from his standpoint forbid such action, he is then in position to follow his more radical brother and make a clean sweep of all the organs—ovaries, tubes, and uterus.

The Operation.—The Trendelenburg posture is a necessity, and I

must express my thanks to Dr. Krug for my introduction to this invaluable aid. After seeing him use it some three years ago, I have never failed to avail myself of it, if it could be secured in any possible way.

The usual free incision in the abdominal wall is made and the uterus and appendages exposed. The intestines, which are crowded back by gravity, are then held in position outside of the pelvis by a broad sponge or by a fold of gauze if preferred. The ovarian vessels are tied outside of the ovary, the ligatures employed for this purpose are made to include in addition to these vessels the upper two-thirds of the broad ligaments. The uterus is then cut free from the ligated tissues, and is drawn well up and firmly held by the assistant. By separating the folds of the base of the broad ligaments the uterine vessels are easily isolated and tied. These vessels are so long and tortuous that they can be exposed by stripping back the loose cellular tissue which surrounds them, in this the region of the utero-vaginal plexus.

It is not an essential to lay clear the ureter in order to avoid ligating it, as the exposure of the artery, which can be accomplished by the above method, clears the field sufficiently to enable one to apply the ligature properly. The point at which the vessel should be ligated is about half an inch outside the point at which it reaches the uterus. As a rule this will control the lateral and anterior vaginal branches which are given off within this point. Having tied this ligature, a circular incision is made about the uterus, half an inch above the utero-vesical fold of the peritoneum, and this is carried through the peritoneum in front, the vessels on the sides, and the outer coat of the uterus behind. A rapid and easy dissection quickly carries you into the vagina at its junction with the uterus, and here the amputation is made. As a rule it is best to enter the vagina anteriorly first, and then with your finger in this opening as a guide, you may quickly complete the circular cut with a knife or scissors, as may be preferred. A few bleeding points may now appear in the cellular tissue surrounding the cut end of the vagina, but by holding up this cut end these points are quickly and easily disposed of. The flap which you have obtained from the lower segment of the uterus is now turned in so as to approximate the peritoneal surface and the operation may be said to be completed.¹

¹ In cancer of the uterus, especially when the vagina is involved, this suprapubic method (in the position of Trendelenburg) will prove invaluable. The sides of the uterus the loose folds of the broad ligaments can be searched for infected glands and amputation of the vagina almost to its lower third can be most easily affected.

ACUTE PUERPERAL INVERSION OF THE UTERUS.

BY T. J. MCGILlicuddy, A.M., M.D.,

Surgeon to the Mother's Home Maternity Hospital, etc.

The following is the history of a case of this rare accident:

Mrs. E.—, twenty-three years of age, primipara, said she had uterine disease before pregnancy. She had at this time, ten per cent. of albumen by bulk in the urine. Labor lasted six hours. Just at the final moment of delivery, there was a very severe pain, and the placenta which was said to be firmly attached, was found along with the uterus inverted into the vagina. The hæmorrhage was very profuse, and the patient became exsanguinated. I believe no special efforts were made to replace the uterus, as her condition did not seem to be recognized by those present.

I saw her about fourteen hours after the accident occurred. She was then in a condition which forbade the employment of anæsthetics. The catheter was used, and, after antiseptic precautions, with my right hand in the vagina, I indented the fundus with my fingers brought together into the shape of a cone. The constriction at the cervix was however, too strong to be overcome in this way. I used all the force that could be deemed justifiable, but could not cause the os to relax, and the patient was in no condition for abdominal section. With the tips of my fingers close together, they were slightly and continuously forced through the cervical ring from below upwards, but the contraction was so tetanic, without the slightest attempt at relaxation, that after a time I had to give it up. I do not know but that the inversion might have been reduced if the attempt had been made earlier, but the delay of fourteen hours was probably the cause of the reduction becoming impossible. In another case if I should see it early, and if reduction by indentation through the vagina did not succeed, I would try abdominal section or immediate amputation.

This patient was in a condition of shock, and only gentle manipulation could be tolerated. She died within twenty-four hours after the accident.

I have seen two cases of chronic inversion of the uterus. My preceptor, Dr. Alonzo Garcelon, many years ago amputated the uterus

with an ecraseur in a case of chronic inversion. It was of puerperal origin, of six months standing, and was in a state of chronic inflammation. The patient recovered.

Dr Isaac Taylor was of the opinion that all cases of spontaneous inversion began at the cervix. I am quite sure that there must be many cases of partial inversion or indentation at the fundus which rectify themselves, but which under favoring circumstances would have become cases of complete inversion.

In the Rotunda Hospital, it has occurred but once in 190,000 deliveries. In private practice it is of course more frequent. In the case above reported the cord was wound around the child's neck, wrist and body, and may have been the cause of the accident by the traction on the placenta, due to its shortening.

Traction on the umbilical cord is said to be the most common cause of this accident. It is also said that any one can invert a healthy uterus by pulling on the cord, but the combination of traction with localized improper pressure upon the uterus externally when it is in a relaxed condition, together with an adherent placenta is the usual cause. Precipitate labor has also been credited with producing it. It is also said that irregular contractions and relaxations of the uterus result in inversion, but this is doubtful.

Every accoucheur always has the possibility of this accident in mind while performing the manipulations necessary in the third stage of labor. He is, therefore, always careful to guard against it. It generally occurs in the practice of midwives and unskilled nurses; for physicians, as a rule, would readily recognize the condition and return the uterus to its normal position. The uterus inverted into the vagina has been frequently mistaken by physicians for a large bleeding polypus. If the physician is present when the accident occurs, reduction should be comparatively easy.

In these cases there is always sudden severe pain, followed by hæmorrhage. The difficulty of relieving the uterus is from the contraction of the constricting ring at the internal os. Dilatation has been tried after abdominal section, but it has been successful in but one case.

The following history of a case of inversion of uterus was given to me by Dr. G. R. Peckinpaugh.

Mrs. G.—; twenty-seven years of age, phthisical. When seen by him one hour after labor, the patient was lying in a pool of blood, almost exsanguinated. Nothing had been done to relieve her. The

uterus, with the placenta firmly attached, was found protruding from the vulva four or five inches. The placenta was stripped off, and the uterus replaced. There had been no manual traction on the cord, and the inversion occurred at the final moment of delivery; after a quick labor. The patient made a rapid recovery without fever..

776 Madison Avenue.

THE UTERINE SOUND—ITS USE AND ABUSE.¹

BY MARCUS ROSENWASSER, M.D.,

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Within the last decade Gynæcologists have been much engrossed with the development of pelvic surgery, and have found this occupation not only intensely interesting, instructive, and profitable, to themselves, but have also demonstrated the vital importance to the profession of a thorough acquaintance with the results of their preoccupation and experience. Manual palpation and ocular inspection of pelvic contents from above have fairly revolutionized former opinions based only on palpation from below. With few exceptions, therefore, the pioneers in the new pathology have broken with the past. In their iconoclastic zeal they have often laid violent hands on procedures justly deserving permanent disuse, but have sometimes flippantly dealt with methods meriting careful consideration. Among the latter none seems to suffer more under the ban than the uterine sound—a simple instrument of precision in the diagnosis and treatment of some affections of the womb. So much has been written and said on surgical topics connected with our specialty, that the selection of a kindred subject seemed an ill requital for your kind invitation and indulgence. You will, therefore, pardon my effort to recall to your attention this lowly cast-away, and lend a patient ear to this modest plea for its limited restoration.

Looking from the vantage ground of to-day, with its new pelvic pathology and its gospel of cleanliness, we can recognize the many mistakes of the past, among them the mischief done by the uterine

¹ Read before the Mahoning County Medical Society, Youngstown, O., Oct. 24, 1893.

sound—a mischief that is still being committed by those who have paid no heed to lessons recently taught. But were not our hands and fingers and instrumental aids, the surgeon's probe, the bougie and catheter and obstetric forceps also productive of sepsis and traumatism? Has not the new era accomplished a reform in our methods and manipulations? Is it fair to pick out the uterine sound and condemn it because of the ignorant abuses of the past, without according it the same opportunities to improve that have been conceded our no less guilty hands, fingers and other instruments? Guided by our knowledge of pelvic pathology and of the rules of asepsis, we claim for the uterine sound some uses in which it is as indispensable as it is devoid of harm.

Three qualifications are essential to enable one to make proper use of the sound:

First, *the operator must have the necessary experience in bimanual palpation to approximately map out the conditions existing in the pelvic cavity.* Until this skill is gained, instrumentation is aimless, hazardous and unjustifiable.

Secondly, *he must be familiar with the possibilities of the instrument; its indications and counterindications.* With clean finger and gentle handling a person inexperienced in indagation may grope about the vagina harmlessly, but supplied with a sound he will do as much execution as with a stick or a club. The fault is not with the tool, but with the mechanic. This division of our subject comprises the gist of the argument and is reserved for discussion in detail.

Thirdly, as in all other surgical procedures, *the hands of the operator and his instruments, as well as the field of examination must be aseptic.* This axiom requires no special emphasis at my hands to impress its importance.

I. THE INSTRUMENT.

I use what Mundè calls the "stiffly flexible Simpson sound." It should be of heavy metal; aluminum is too light. The patient is placed in the dorsal position with buttocks on the extreme edge of the table, knees and thighs flexed, and heels in stirrups. A careful bimanual examination is now made. If this prove satisfactory no instruments are used. If a sound is needed to complete the diagnosis, it is introduced through a bivalve speculum. The cervix is first wiped and washed by means of pledgets of absorbent cotton wet with an antiseptic fluid. The sound, curved to correspond as nearly as possible to the

previously ascertained direction of the canal, is dipped in the same fluid, then slowly and gently allowed to glide along the cervical canal propelled by its own weight, but directed between the thumb and two fingers. The handle will often describe an arc of 90° or more in adapting the sound to the curve of the canal. To facilitate this manoeuvre it is sometimes necessary to depress the lower end of the speculum. Frequently it is of advantage to reverse the sound or deflect laterally a short distance, and then to direct forward. The introduction should be by degrees, as the folds or sinuosities and muscular resistance of the canal yield, and indicate the advance of the point. Force is just as much to be deprecated here as in the passage of the sound into the male urethra or bladder, or of the nasal catheter into the Eustachian tube. If the sound meet with an obstacle, it is due to a stenosis of the canal or to improper curve of the instrument. A stenosis, be the cause stricture, flexion, or tumor is best explored by a probe. No exact rule can be laid down as to the degree of curve to be given the upper end of the sound. In general, the normal position, or a forward displacement requires the greatest curve; the first degree of retroversion but a slight bend: a complete retroversion will best admit a straight sound, and a retroflexion requires a moderate backward curve.

2. THE INDICATIONS AND USE.

a. *To ascertain the degree of patency of the cervical canal; to explore the condition of the mucous lining of the cavity, and to measure the depth of the uterus.* Those who discard its use cannot point to a single symptom by which a stenosis can be demonstrated without sound or probe; nor can they help us discover the sensitiveness or hæmorrhagic tendency of the mucous lining; nor can they adduce other means by which an accurate knowledge of the size and shrinkage of the womb in subinvolution can be obtained. Furthermore, they cannot assign any reason why the proper use of the sound should be especially calamitous, when the similar use of like instruments in organs even more sensitive is conceded to be most appropriate and surgical.

b. *To define the position of the womb in the pelvis and the relation of the cervix to the body when these cannot be accurately established by the bimanual.* The sound will clear the doubt in the case of a fleshy woman, through whose fat abdominal wall we think we feel the fundus, or fail to feel it. The sound will carry conviction in the event of non-

agreement among consultants as to the status of the womb in the pelvis.

c. *To induce early abortion.* Experience has taught many of us how easily an unwitting use of the sound can bring on the discharge of an impregnated ovum. Following this cue I have used the sound within a few days after missed menstruation in cases in which a possible pregnancy was deemed inadvisable or dangerous. The sound is introduced to the fundus and allowed to rest in the uterus one or two minutes to induce imperceptible contractions. A reintroduction after a few days usually effects a safe discharge. I prefer to empty the uterus in one session by the rapid method when pregnancy is more advanced.

d. *To assist in replacing some cases of retroversion.* Reposition can be effected in most cases by bimanual manipulation. A patient who is very nervous, or one whose abdominal wall is very thick cannot be thus managed. The sound is here a valuable aid. It is introduced through the speculum, and held in place by the right hand while the speculum is being removed over it with the left. The left index finger is then placed into the posterior vault, pushing the fundus upward and forward while the handle of the sound is being depressed. The vaginal finger thus guards against injury and facilitates the replacement. While some might advocate the use of the repositor, I prefer the sound; the principle remains the same.

I would not recommend the sound where of doubtful utility, or where an anesthetic would better establish a diagnosis, or where the procedure might be attended with danger. For instance, in differentiating retroflexion from retrouterine tumors, or uterine polypus from inversion; or in efforts to locate interstitial fibroid in either wall in the presence of a tortuous canal.

3. THE COUNTERINDICATIONS AND ABUSE.

a. *The sound is not to be used where its presence would increase existing irritation or inflammation.* Hence it is to be avoided in acute pelvic disease; during the menstrual period; after missed period.

b. *It is not to be used where it might be the carrier of malignant or contagious disease.* Hence don't use it in epithelioma, or gonorrhœa of the cervix.

c. *It is not to be used in conditions in which it might produce a trauma.* Hence don't use it in cases of adherent uterus with diseased appendages, or in tumors or conditions which can be recognized without such aid. It is in the last class of cases (c) especially that "tinkering" has been followed by frequent mishaps and disasters. Our vic-

tims must often pay the penalty of our experience. We ought see to it that this penalty be not excessive. It were far better we conceal our ignorance behind our fist than behind an arsenal. In this instance the instrument bag covers a multitude of sins. The man who cannot outline a pelvic tumor, or diagnose a fixed uterus, or who will attempt to pull into position a cervix crowded to an extreme corner of the pelvis, never realizing the pathological mass that holds it there, must not carry his satchel to the bedside of his female patient. He will thus avoid the temptation to lay out his armamentarium. He will have a smaller number of sufferers from chronic invalidism, sepsis, peritonitis, or pelvic abscess. He will have fewer deaths.

Considering this former lack of familiarity with the pathology and the methods of physical diagnosis, and adding thereto the utter neglect of the principles of asepsis, is it a wonder that, impatient at the ignorance displayed and the havoc produced, our pioneers in abdominal work denounced the instrument that was the innocent perpetrator of some of this mischief, and relegated it to everlasting oblivion? I believe, however, with the new light dawning upon us, with the acceptance of the revelations of modern surgery, with the diffusion of this knowledge even among those farthest removed from laboratory and clinic, the time has come when we may rescue the much abused sound and re-establish it in its limited sphere without clashing with those who, in their righteous indignation, have broken the tablets but have not destroyed the law.

THE LAW.

1. Let none use the sound who have not the necessary experience in bimanual palpation to make an approximate diagnosis in pelvic disease.
2. Strict asepsis of hands, instruments and field of examination are enjoined.
3. A thorough familiarity with the technique is essential.
4. Use the sound only for necessary information concerning the inside of the uterus not otherwise obtainable; or to induce early abortion; or to assist in replacing a movable uterus in exceptional cases.
5. Don't use the sound when irritation or inflammation already present would be increased; or when it would be the carrier of disease products or germs; or when its use would be likely to cause injury to agglutinated adjacent organs; or lastly, when the information gained would be inessential.

SUBINVOLUTION OF UTERUS, AND ITS TREATMENT BY ELECTRICITY.¹

BY DR. CHAS. G. CANNADY, ROANOKE, VA.,

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Sir James Simpson's "Subinvolution;" Scanzoni's "Chronic Parenchymatous Metritis;" Klobes' "Habitual Hyperæmia, with Profuse Proliferation of Connective Tissue;" Edis' "Metritis;" Hodges' "Irritable Uterus;" Lisfranc's "Engorgement;" Kiwisch's "Infarctus," and Nœggerath's "Diffuse Interstitial Metritis," or any other name that may describe the enlarged and engorged condition of the uterus only recalls to the practitioner, up to a few years since, the stubborn and unyielding condition he has to treat. To Sir James Simpson we are more indebted than to any other for accurately defining and calling attention to its frequency and treatment. One of the first to describe its macroscopical and microscopical appearance was Snow Beck in 1851.

Its ætiology is interesting in the extreme. Everything that could have been credited with producing a pathological condition of the pelvic organs has been claimed an exciting cause, but it seems that a large number of those cases coming under observation have followed abortions, lacerations, twin pregnancies, and similarly enlarged pregnant uteri (viz: large children, hydramnios, etc), and in those delicately constituted as to uterine development. This will cover a wide field; and to this might be added another very frequent cause, viz.: the practice of using ergot at some time during labor, which stimulates the contraction of the unstriped muscular fibre, producing a quasi-tetanoid spasm of the uterus, which subsequently fails to contract sufficiently to induce involution. As to Histology: The bulk of the investigators concede that the uterus consists of unstriped muscular fibres in the highest state of development, varying in length from one-one-hundred-and-tenth to one-fortieth of an inch, as it is found in the unimpregnated or gravid state, also yellow elastic,

¹Read before the American Electro-Therapeutic Association at Apollo Hall, Chicago, September 14, 1893, at its annual meeting, Messrs. Lophthorn Smith, Hays and Massey, in discussion endorsed the paper.

fibrellar and homogeneous connective tissue, round spindle-shaped and irregular cells (Thomas' elementary fusiform fibre cells) serous membranes, mucous membrane, nerves, blood vessels and lymphatics.

During gestation, the muscle cells enlarge to ten times their size in the unimpregnated uterus. All the remaining anatomical structures of the uterus during gestation are enlarged. After parturition, the uterus should rapidly decrease, until in four to six weeks it has attained its normal size. This change is the result of the fatty degeneration of the muscular fibre, with the subsequent absorption of this fatty material, and its removal from the uterus. This is brought about by the impaired nutrition, the result of the chronic contraction of the unstripped muscular fibre, which contraction should be immediate and permanent after delivery, otherwise, the nutrition of the cells are not impaired, foundation for excessive amount of connective tissue is laid, and normal involution cannot obtain. As all writers recently have occasion to regret, pathology is very scanty on a disease which has had a recognized position in gynæcology for the last forty-five years. It is evident to all observers that there is an excessive amount of tissue present in the uterus, and that there is also quite a defective condition of both the vascular and lymphatic systems. No clear and concise limits can be definitely fixed between the pathology of some forms of chronic metritis and subinvolution. Mary Putnam Jacobi, who, under a very careful study of the subject, found the muscular fibres enlarged, with nuclei disappearing, and smaller fibres with indistinct central nuclei; others still smaller in which the nuclei were distinct, while in another variety no nuclei were discovered, but granular and oil globules were found, and that the wasting of the cell began in the protoplasm and ended in the nucleus. She found among these fibres nucleated connective tissue cells and amorphous tissue. The blood vessels and lymphatic were very much enlarged and intimately connected with the muscular tissue, which she considers a strong diagnostic point from chronic metritis, as herself and De Sinety have shown in the latter a perivascular condition is present. Its diagnosis is generally easy, when we remember that an abortion or pregnancy must be present as a starting point. Hanson finds that involution extends over a period of twelve weeks, but that in two-thirds of the cases the uterus has returned to normal in from six to ten weeks. Weakness of the back, excessive lochial discharge, or the appearance of menorrhagia may be the most important symptoms found during the puerperium. Evidently in the first stage, we have hyperæmia and

congestion. A large flabby uterus, with thickness of walls increased and the sound reveals an enlarged uterine cavity; the mucous membrane bleeds freely. Whether this be chronic metritis or subinvolution uteri following abortion or confinement, matters little in the treatment.

As to treatment: that, other than electricity, will only lightly be touched upon. As prophylactic clearing well the uterus of clots, the use of weak antiseptic vaginal injections, refraining from use of ergot, or any of its kindred drugs at any time in labor, or, if used during labor, to be continued for several days after labor at suitable times to induce and maintain contraction of unstriated muscular fibre, and to induce physiological mal-nutrition, so necessary for the fatty degenerative process common in normal involution. Tonics, baths and drugs, hastening abortion, with nutritious diet will accomplish much in building up the system. Vaginal injections of hot water 110 or 115°, using three or four gallons once daily, with pledgets of cotton every third night, inserted up the vagina, saturated with anhydrous glycerine and boro-glyceride, with the application of iodized phenol on a cotton wrapped probe, or, better still, by a few drops injected into the cavity of the uterus with an intra-uterine syringe, provided the os is patulous, will all hasten the cure. If the os is very much congested, a Bittle scarificator plunged into the cervix and the congestion relieved in this way will do much good toward aiding a cure. But the greatest amount of good can be accomplished in the least time by the proper application of electricity. The detection of subinvolution is generally not accomplished as early as the tenth day, from the fact that any symptoms referable to this is not generally attributed to this cause, but if it is detected at so early a stage, that is, at ten days, and the intra-uterine dimensions is found to be ten centimetres, and much tenderness does not exist, we should use the Medium Engleman Coil, having a length of 200 metres and a diameter of seven millimetres, with the bipolar vaginal electrode, after the manner suggested by Apostoli, using as powerful current as the patient is able to stand to accomplish the object. This to be continued for five minutes, then to be discontinued for ten minutes, with the electrode in same position, when the current should be re-applied for a period corresponding for same time, when the electrode should be removed. If a more powerful effect is desired, the intra-uterine bipolar method should be tried, having the proximal pole of the intra-uterine electrode stop at the os and the distal as far toward the fundus as it will reach, pressing it alternately to posterior,

anterior and lateral portions of uterus. This is to be used with Engelman's coarse coil, having a diameter of one-fourth millimetres and a length of sixty-six metres, with a strong current. But in failing to effect involution in this manner, as will often be the case, owing to such a sensitive condition of parts, or to the infiltration of tissue being so abundant and so organized as to preclude any certain results from the treatment, we must adopt another. The writer is mainly influenced by Hansen's observations as to diagnosis of subinvolution, and if there is found at the second week a uterus varying from eight to thirteen centimetres, at third week from seven and five-tenths to ten and five-tenths, and at the fourth week from seven to nine centimetres, and fifth week from six to nine centimetres, it is concluded subinvolution is to be dealt with; and, provided symptoms are present as above described, the case is treated on a different plan, by aiming, first, to reduce the engorged and congested condition; secondly, to absorb hyperplastic elements, and, thirdly, to restore tone to muscular and vascular structures. This consists of, first, positive galvanic intra-uterine application of at least thirty milliamperes from eight to ten minutes, and if much tenderness exists and pain is induced, to be followed by the vaginal bipolar application of the faradic current from a coil having a diameter of .225 millimetres, and having a length of 600 metres, after the method as described by Engleman. By this means the uterus is relieved of engorgement, the unstriped muscular tissue composing the uterine walls are strengthened, and the walls of the blood vessels are restored to their normal contractile powers. The capillaries are relieved of their hyperæmic condition, and the process of involution is in every way aided. Bipolar intra-uterine faradization must be carried out to be effective in this instance by the bipolar intra-uterine sound.

If the subinvolution has passed the stage of active congestion involution may be hastened by using the negative pole of the galvanic current—intra-uterine—especially if the uterus presents a hardened condition. In several instances in which ergot was freely used during labor, the author has used the daily application of the faradic current to uterus for seven or eight days, as used by Trippier and Apostoli, of Paris, and in each instance with the happiest results, and is of the opinion that this should be used in all cases where ergot has been freely used during labor; strict antisepsis being carried out in each instance.

By this method described, the conclusion is reached that subinvolution uteri can be cured in one-half of the time consumed by any other means than electrical.



CHARLES JEWETT, A. M., M. D.

THE NEW YORK JOURNAL OF GYNÆCOLOGY
AND OBSTETRICS.

SKETCHES OF EMINENT LIVING GYNÆCOLOGISTS AND OBSTETRICIANS OF AMERICA.

CHARLES JEWETT, A.M., M.D.

Doctor Jewett was born at Bath, Maine, and received his early education at the public schools of that city. Maine has been noted for the industry and hard-working qualities of her sons, and that the subject of this sketch was not unworthy of his State is shown by the fact that he finished the four years' course at the Bath High School, in three years, and that he received the prize for English composition at the time he graduated at Bowdoin, in 1864. A short time after receiving the degree of B.A. he taught Physical Sciences in the Cooperstown Seminary, and a year later at the Adelphi Academy in Brooklyn. The degree of A.M. was conferred by his *Alma Mater* in 1867.

Doctor Jewett studied medicine with Doctor Hiram Lathrop, of Cooperstown. He attended lectures at the Long Island College Hospital, at the University Medical School, and was graduated by the College of Physicians and Surgeons in 1871. Nine years later he accepted the position of Professor of Obstetrics at the Long Island College Medical School and has since then performed the duties of this position. In 1878 he was elected President of the Medical Society of the County of Kings, and he was so popular a presiding officer that the Society reelected him in 1879 and also in 1880. He is at present Physician to St. Mary's Hospital, Obstetrician to the Long Island College Hospital, and Consulting Obstetrician to the King's County Hospital.

Among the foremost teachers of obstetrics of to-day Dr. Jewett has stamped his individuality on the practice of Brooklyn. The manikin teaching at the Long Island College Hospital, done under his supervision, is not surpassed in the world; and while Vienna or Prague may offer a greater chance to study the practice in dealing with deformities of the pelvis, there is no course of which we have knowledge that gives so clear an understanding of the mechanism of normal labor.

Though the subject of this sketch has devoted a great deal of time to the study of the literature of his specialty he is in no sense a man of theory alone, but he is forceful and ready to put into practice the information he has acquired through observation and study. The present day is neither for the mere scholar nor for the empiric; it is for the scholarly man who does not "permit action to lag behind determination."

As a speaker, Dr. Jewett always commands attention for he has an unusual facility for stating the gist of a subject. As a presiding officer, he is deservedly popular for he, perhaps more than any of the men of the present day, keeps speakers to the subject under discussion.

He has been President of King's County Medical Society, Chairman of the Department of Obstetrics and Diseases of Women, of the Academy of Medicine, and is now President of the New York Obstetrical Society.

The following list includes the contributions of Dr. Jewett to Gynæcology and Obstetrics: Galactocoele (note). Proceedings Med. Soc., County of Kings. *Report Upon* the Case of Dr. E. A. Groux. Fissured Sternum. Annals Anat. and Surg. Soc., Vol. 1. Photomicrography and its Application to Medicine. Proc. Med. Soc., County of Kings., Aug., 1885. *A Case of Cæsarian Section.* *N. Y. Med. Jour.*, Aug., 1885. Two cases of Laparo-Elytotomy with Remarks. Trans. of The American Gyn. Soc., 1885. Notes on Hospital Obstetrics, *N. Y. Medical Journal*, Nov., 1885. Notes on the Treatment of Puerperal Eclampsia. Trans. Am. Gyn. Soc., 1887. *Article* on Electro-Therapeutics in Skene's work on the Diseases of Women. Episiotomy. *Brooklyn Med. Jour.*, Nov., 1890. The Sources of Puerperal Infection. *Brooklyn Med. Jour.*, 1890. Case of Ruptured Tubal Pregnancy. Trans. of Am. Gyn. Soc., 1890. Comparative Value of the Biniodide and Bichloride of Mercury as Surgical Antiseptics. Trans. Am. Gyn. Soc., 1890. Tubo-Uterine Pregnancy. *American Jour. of Obstetrics and Diseases of Women and Children.* Nov. 7, 1891. The Diagnosis of Pregnancy in the Early Months. *Therapeutic Gaz.*, July, 1891. A Case of Symphyseotomy. *Brooklyn Med. Jour.*, Nov., 1892. The Application of the Electric Light Current in Electro-Therapeutics. *Brooklyn Med. Jour.*, 1892. Two Successful Cases of Conservative Cæsarian Section. Trans. Med. Soc., State of N. Y., 1892. To what Extent is the Diagnosis of Pregnancy Possible in the Early Months. *Brooklyn Med. Jour.*, Feb., 1892. Clinical Limitations of Symphyseotomy. Trans. Soc. State of N. Y., 1893.

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Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the expense that the JOURNAL incurs by such changes.

EDITORIAL.

AN IMPORTANT ANNOUNCEMENT.

The January issue of this Journal will bear upon its cover the name of Messrs. D. Appleton and Company as publishers. While the editors and proprietors of THE NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS have surrendered no right which lessens their responsibilities to the profession, they have secured the coöperation of a firm whose reputation for literary and artistic excellence in its publications, as well as its reputation for generous dealing with medical men, is unequalled. Under such auspices, the success that the JOURNAL has achieved cannot fail to be greatly increased. We feel a sense of responsibility rather than one of self-laudation when we say that this success has been far beyond our greatest expectations. The friends who stood by us in the hour of weakness we shall ever remember with gratitude and it will be our aim to justify their support by untiring endeavor to promote meritorious progress rather than to mirror the sensation of the hour.

We regret to announce that the name of a distinguished and hard working collaborator will not appear in the succeeding issue. Dr. J. C. Reeve desires to free himself from all work not directly connected with his practice. His withdrawal will be a great loss to the review department of the JOURNAL.

Another change to be noted is an increase in the number of pages. The volume for the coming year will contain one-third more reading matter than the present volume. The price will be four dollars.

DOES EXTIRPATION OF THE OVARIES USUALLY BRING ON A NORMAL MENOPAUSE?

In the department of the JOURNAL allotted to original communications will be found an article read by Dr. Polk before The New York Obstetrical Society entitled "Hysterectomy (Supra-Pubic) for Salpingitis and Ovaritis." Referring to cases in which it is necessary to remove ovaries for disease or to bring on an artificial menopause, the writer recommends the complete removal of the uterus at the same time, provided that this added operation does not materially increase the immediate risk of the operation.

If the ovaries are removed, the uterus not only ceases to be of use, but Dr. Polk states that in his experience the uterus "may become a useless, vexatious, and, perhaps, a dangerous organ."

In the discussion that followed the reading of the paper, it was maintained by some, few cases present the original symptoms after the ovaries had been removed, therefore the radical procedure would rarely be required. This is a very important point to settle, for on relative frequency of these cases hinges the question propounded in the title of this editorial, and every conscientious pelvic surgeon should give careful consideration to the subject. Many cases are met with which are not in the least degree benefited by the removal of the appendages; we do not refer to those cases that suffer as the result of the operation as in case of prolapse of the anterior wall pointed out by Emmet, but to those cases which are not relieved from the distressing symptoms indicating the operation. As an explanation for the persistence of these symptoms it is urged that the appendages have not been completely extirpated or that the uterus had not been thoroughly curetted. Dr. Polk meets this objection by the statement that in cases in his practice in which no such cause for failure existed for the tubes had been exsected from the walls of the uterus and curettage had been performed in a most thorough manner, yet the original symptoms persisted, and that these symptoms were subsequently relieved by hysterectomy.

Moreover, such cases have been seen by him frequently enough to lead him to the belief that when the ovaries are to be sacrificed, the uterus should go with them. From this standpoint his method is logical and is detailed very clearly. By means of an abdominal section, he inspects the appendages and removes hopelessly diseased organs or parts of such organs as cannot be restored to their normal condition. The

greatest care is exercised to save ovarian tissue, nor is the smallest portion sacrificed if it be possible to preserve it; but if the ovaries must be sacrificed, hysterectomy is performed. For the author believes that the ovary is necessary to the perfect health of the woman even though she has lost the tubes.

The author states, in defense of the method of removing the entire cervix, that he does not fear hernia, and that in cases he has operated upon the pelvic floor has not become in any degree impaired. We believe that in this instance, as in many others, the words used in describing a fact have given a false conception of the fact. One is very apt to think of the vault of the vagina or of the fornix of the vagina as an arch which supports something, whereas any arch of which the cervix formed a part could never have any sustaining function for the reason that the cervix can in the healthy woman be raised or depressed below the lowest upper or lower lines of pressure. In spite of all arguments advanced, however, we do not think the matter is settled, yet we must congratulate Dr. Polk for so ably opening the subject.

REVIEWS.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. W. S. PLAYFAIR, M.D. Sixth American from eighth English edition, with notes and additions by Dr. ROBERT P. HARRIS, M.D., in one octavo volume of 697 pages; cloth, \$4.00; leather, \$5.00; Phila., Lea, 1893.

Playfair appeals to the student. It is simple and straightforward, and interesting reading. His old affection for the book induced the writer to look through this edition with a strong prejudice in its favor, and he is sincerely grieved to undertake the ungracious task of indicating very important instances covering many of the liveliest issues in which the English obstetrician is not in accord with the commonly accepted teachings. The omission of any reference to abdominal palpation, excepting one brief and discouraging one, p. 313, is a case in point. Seventeen lines covers the all-important subject of the working details of sterilising hands and genitals before labor; later the stress is almost entirely on the dip into an antiseptic solution as the preparation for operation; and the sponge tent is highly endorsed.

This edition shows no considerable enlargement, and few new cuts.

The early diagnosis of pregnancy is hardly touched on as far as the consistency of the uterus is concerned, which must be the test. For tubal gestation laparotomy is advised, but fœticide by electricity countenanced. To induce labor, intrauterine injections are regarded with disfavor, but without mention of glycerine, or carrying the fluid to the fundus; and the bougie, the sponge tent to hold it in place ten hours, dilatation by fluid bags, and puncture are preferred.

Symphiseotomy occupies six pages, mainly written by Dr. Harris. Dr. Playfair has had no personal experience with the operation, and speaks of an average separation of the bones after section as three inches while Dr. Harris states that one and a quarter to one and a half inches is the usual amount. Two and three quarter inches in the true conjugate is said to be the proper lower limit of the conjugate for our larger American children. Sufficient practical details for the operation are not clearly given. Playfair seems to endorse the opinion of "most British authorities" that "Cæsarian section need not be resorted to if the smallest diameter of the pelvis exceed one and a half inches," and adheres to craniotomy.

To arrest post-partum bleeding ice and perchloride of iron are still advocated, and hot water and packing are recommended in a lukewarm manner on hearsay evidence.

The author again states his belief that sewer gas will produce puerperal septicæmia, and evidently still cleaves to self-infection as the reasonable explanation of a number of cases. The intra-uterine douche is advocated. Curetting is given a cursory note as the practice of others, and is only to be resorted to in exceptional cases of sepsis.

Altogether, on the questions of the day, and on some of the very vital questions, chief among which is the careful instruction in the methods of the new antiseptic midwifery, this edition of Playfair impresses one as not being a book to be recommended to the student as it could be heartily recommended, years ago.

TRANSACTIONS OF THE NEW YORK OBSTETRICAL
SOCIETY.

Stated Meeting October 17th, 1893.

GEORGE TUCKER HARRISON, M. D. President.

Double Ovarian Abscess and Double Pyosalpinx.

Dr. H. N. VINEBERG presented this specimen.

Among other points the case is of interest as bearing upon the discussion to-night. The history briefly is as follows: The patient, who was the mother of four children, and thirty-five years of age, consulted me first about three years ago, six weeks after the birth of the last child. She had been having chills and fever, and had been treated for malaria. I found an immense pelvic abscess, which was easily evacuated through the vault of the vagina behind the uterus. The patient made a rapid recovery. But a few weeks after she began to be about, she came to my office saying that she tired easily, had considerable backache, and that she did not feel as strong as formerly. On examination, the uterus was found retrodisplaced and rather firmly adherent to the rectum. A course of treatment consisting of galvanism, massage and Ichthyol tampons gave her very much relief. The local condition was also improved. The adhesions were not so tense and firm, and the uterus could be brought forward as far as the promontory. Although I saw her frequently after this, having been called to see other members of the family, she made no complaints of her pelvic trouble, until April 27th of this year, a period of nearly three years. At this time I found her in bed and elicited the following history: Two days before, while menstruating, she had been exposed to rain, getting completely drenched. That evening she was seized with great pain in the abdomen, had several chills and vomited several times. The chills had ceased, but the pain, fever and vomiting continued. At the time of my visit she had a temperature of 102° under the tongue, a rapid and small pulse, a coated tongue and the whole abdomen was exquisitely tender to the touch, but the point of greatest tenderness was in the neighborhood of McBurney's point. A bimanual examination was unsatisfactory, owing to the rigidity of the abdominal walls. In about a week under appropriate treatment the acuteness of

the symptoms subsided to such a degree that I could make a satisfactory bimanual examination. This revealed an irregular hard mass, the size of a Bologna sausage lying behind the uterus and extending to the right side. There was considerable induration to the left of the uterus and the uterus itself appeared considerably enlarged. For the following three weeks the temperature ranged from 100° to 101° , the pulse from 90 to 120, and she was tolerably free of pain, excepting when she had a movement of the bowels, which was always attended with excruciating pain. The menses now appeared and were accompanied with very great pain. The mass behind the uterus remained about the same, but the induration on the left side became more circumscribed and presented itself now in the form of a spherical tumor, about the size of a Florida orange, and was distinctly fluctuating. She was now seen in consultation by a colleague of note, and examined under an anæsthetic. The above local condition was substantiated and the consultant diagnosticated in addition a fibroid growth of the uterus.

On June 13th, with the kind assistance of Drs. Coe and Raw, I performed a cœliotomy on the patient at St. Elizabeth Hospital. On opening the abdomen it took some time before the true condition of things was ascertained. The whole pelvis seemed to be filled by one mass, over which the intestines lay closely adherent. After carefully peeling off the intestines, having in many instances to use the sharp edge of the knife to sever the adhesions, I found that the left ovary was converted into a pus sac, the size of a Florida orange, and firmly implanted upon the posterior surface of the left cornua of the uterus. It lay behind the broad ligament to which it was also firmly adherent. In spite of the greatest care the abscess sac burst in the attempt to remove it. But the intestines had been carefully protected by means of sterilized gauze. The pus was at once soaked up with sponges and the pelvic cavity irrigated with sterilized hot water. The right tube and ovary were shelled out of their bed of adhesions, unruptured with comparative ease, and a glass drainage-tube and an iodoform-gauze tampon were inserted and the abdominal wound brought together in the usual way. The patient rallied fairly well from the operation and for the first twenty-four hours things looked favorable. Then symptoms of peritonitis set in and the patient died within seventy-two hours from a virulent form of septic peritonitis.

The points of interest in the case, to my mind are :

(1.) The occurrence of ovarian abscess of so severe a type,

independent of the puerperium or abortion. The lesion in my opinion, was the result of exposure to wet during the menstrual period.

(2.) The close similarity of the symptoms during the first four or five days to those of appendicitis.

(3.) The virulent character of the pus, for notwithstanding all the precautions taken, a contact for a few moments with the peritoneum was sufficient to set up a violent form of septic peritonitis.

(4.) The question whether a patient whose general condition is so low as it was in this case, runs the greater risk from the shock attendant upon the longer operation of removing all the pelvic organs, or from the chances of infection after removal of the diseased appendages only.

DISCUSSION.

Dr. E. H. GRANDIN said he had seen three cases, a report of which was given last month to the New York County Medical Society, where it was exceedingly difficult to make the differential diagnosis between appendicitis and ovarian abscess. In the discussion of this paper, one of the leading surgeons of this city made the point that the differential diagnosis should not be difficult for the reason that the pain in appendicitis is at a higher level than in ovarian abscess. This, however, did not at all accord with his own experience, which had taught him that the pain in ovarian abscess may be just as high, just as fixed, and just as erratic as that associated with a rather mild appendicitis. He had come to the conclusion that in these instances where it is especially important to reach a diagnosis early, it is advisable in doubtful cases to anæsthetize the patient, so as to make a thorough rectal, as well as vaginal examination: because if it be a suppurative appendicitis, the safety of the patient demands prompt removal of that appendix in order to avoid purulent peritonitis and death. The same rule may not apply to ovarian abscess, because it rarely ruptures into the peritoneal cavity, causing purulent peritonitis.

Dr. G. M. EDEBOHLS said that this specimen raised an interesting question in connection with the etiology. He understood the speaker to say that the trouble in his case was probably due to "catching cold." At the present time, the conclusion that any disease affecting the genitalia of women is due to catching cold can only be made after carefully excluding every other possible cause. In regard to ovarian abscess, other causes must be excluded, especially the part which microbes play in the production of disease. A number of ovarian

abscesses have been carefully investigated bacteriologically, in Berlin especially, disassociated with tubal trouble of any kind, and yet the pus from these ovarian abscesses, was found to contain gonococci. It is very difficult to understand how they get into the interior of the abscesses, but it is indisputable that they have been found there on a number of occasions.

Again, various affections may arise from the proximity or adhesion of the ovary to the intestine, for, intestinal bacteria have been known to find their way through the intestinal wall, and probably also through the ovarian wall, and so cause infection of the ovarian tissues or of cystic formations in the ovary. The main point he wished to make was, that we should not rashly state that a certain case of ovarian abscess or tubal abscess, or other pelvic trouble in the female is due to "a cold"; the evidence must be furnished that it is not due to anything else before this theory can at the present time be accepted.

Regarding the differential diagnosis between appendicitis and ovarian abscess on the right side, he thought every one would admit that in the later stages of both affections when an acute peritonitis has supervened, and the abdomen is so tympanitic that palpation is impossible, the diagnosis will not be much aided by bimanual examination, and must be made, if at all, on the history of the case. Leaving out the history as a factor in the present consideration, he wished to refer to the bearing of bimanual examination on this differential diagnosis in the early stages.

He believed that in the early stages these conditions should be differentiated by the skilled gynæcologist without much trouble. For instance, an ovarian abscess can be in almost all cases reached from the vagina, or by the rectum. This is very rarely the case with an appendicitis in the early stage, in which contrary to the opinions accepted by many, the appendix can but exceptionally be reached from the rectum. If the Fallopian tube can be clearly palpated on a higher level than the tumor whose differential diagnosis we are trying to make, and especially if this tube be found normal, then the chances are ten to one that it is an ovarian abscess, and not an appendicitis; whereas if the tube is recognized at a decidedly lower level than the pathological mass we are investigating, the probabilities are that we are dealing with an appendicitis. In the case of an ovarian abscess one should be able to feel the normal appendix vermiformis above the abscess. This statement may perhaps be accepted with some skepticism, but he felt sure that in any woman in whom a normal

sized tube can be easily palpated, the vermiform appendix can be just as readily palpated, the palpation being practiced from the exterior of the body, using the posterior wall of the abdomen as a point of counter-pressure.

This statement was made advisedly, for during the past year he had been examining patients carefully by this method of palpation with the special object of recognizing the vermiform appendix, and in about two-thirds to three-fourths of the cases he found the normal appendix could be recognized in this way without difficulty. If then above the tumor in question you can feel the normal appendix vermiformis, the diagnosis is of course very easy. He felt certain that this method of palpation would in the future furnish valuable aid in the differential diagnosis of the two affections under consideration.

Dr. RALPH WALDO said that two weeks ago he was called upon to make this differential diagnosis. Some of the symptoms described by the last speaker could be made out by palpation, but although in a large experience at the Out-Door Department of Bellevue Hospital he had made a special study of the palpation of the various abdominal organs, he must admit that he was unable to palpate the vermiform appendix unless it was decidedly enlarged.

There were, however, in appendicitis some symptoms of much value. Having had the misfortune during the past year to be a victim of a perforating appendicitis, he thought he knew something of the subjective symptoms of this disease. Having compared the symptoms he observed in his own person with those found in other cases of appendicitis, he had become impressed with the idea that a sense of extreme depression, felt directly over the stomach, is a point of much diagnostic importance. This sensation is easily distinguishable from the general abdominal pain and tenderness. In a case in which he was asked to make the diagnosis there was an enormous deposit of fat in the abdomen. Being unable to detect any swelling or deposits in the immediate neighborhood of the uterus by examination through the rectum and vagina, he made the diagnosis of appendicitis on this symptom. He had watched the subsequent course of this case in the hospital, and all who had seen her concurred in this diagnosis.

Where the appendix is high up the diagnosis is very much more easy. In cases where the appendix is adherent to the ovary, or quite low down, there will be in the early stage more or less bogginess about the side of the uterus, and more or less pain at this point when the examiner attempts to move the uterus. The sensation of extreme

depression in the region of the epigastrium is found both in women and men. He had examined quite a number of cases in regard to this particular rational symptom.

Dr. W. GILL WYLIE related the history of the first case in Bellevue Hospital in which he operated for appendicitis. The patient was a male who presented slight dullness in the right ileo-cæcal region, with localized peritonitis, and a high temperature in the afternoon, accompanied by profuse sweating. As these symptoms indicated pus in the abdomen, he felt that it was his duty to perform abdominal section. After consultation with several of his colleagues, he found one who agreed with him in the diagnosis. Accordingly the patient's abdomen was opened, and more than a pint of pus evacuated. Most of the appendix sloughed away, and the patient made a good recovery. Since then he had operated sixteen or seventeen times.

He thought, as a rule, one familiar with the subject could readily diagnosticate between ovarian abscess, pyosalpinx and appendicitis. Fortunately the differential diagnosis is not of much practical value, for if there is evidence of the formation of pus, with signs of localized peritonitis, either about the appendix or the tube and ovary, it is generally admitted now that the proper procedure is to open the abdomen. If the diagnosis be much in doubt, he thought was it best to make an incision in the median line. In six cases where he had operated for disease of the tube and ovary, the appendix was involved to such an extent that it required to be removed, either because it was diseased, or was so intimately adherent (to the appendages) that it became necessary to remove it.

About one week ago his brother, Dr. R. H. Wylie, was called to a case which he believed to be an appendicitis, but to the right of the uterus there was a tumor very closely resembling an ovarian abscess, and situated quite low in the pelvis. The woman had a rapid pulse and high temperature, and was in bad condition. On opening the abdomen, the appendix was found between the ovary and tube, and in a gangrenous condition. In such a case, it is out of the question to make an accurate diagnosis.

Dr. R. H. WYLIE said that with the history one can of course in the great majority of cases make the diagnosis. The vermiform appendix is not only a movable organ, but it occupies very different positions in the abdominal cavity. In operating on cases of pyosalpinx, he had taken off the appendix five or six times, because of its being involved in the other disease. He had seen the appendix as much as

six or eight inches in length, with a very short mesentery, stopping short of the extreme end of the appendix, and lying in Douglas' cul-de-sac.

The case referred to by the last speaker was taken sick on a Tuesday, and her family physician saw her the next day. She soon had a chill and a temperature of 105° , and when he saw her that night, there was a globular and elastic tumor like an ovarian abscess on the right side. The history, however, led him to think it a case of appendicitis, which proved to be the fact.

The point raised by Dr. Waldo is quite useful to remember in taking the history, but this very depression in the pit of the stomach is due, he believed, to inflammation of the gut, and therefore if there were an abscess of the ovary involving also the gut, it is highly probable that the same sensation would be present. On opening the abdomen in his case, the appendix was found to be in exactly the position which would be occupied by an ovarian abscess. The appendix was below the entrance to the true pelvis. Under the circumstances, it is, of course, utterly impossible to make an accurate diagnosis before performing an abdominal section.

Vesicular Mole. Uterus not Abnormally Enlarged.

Dr. H. N. VINEBERG presented a specimen of this kind.

The other specimen is interesting from its rarity and the moot points connected with its pathology. It is in part the product of a conception of about eight weeks' duration. The woman from whom it was taken is thirty-one years old and is married two and one-half years. She has a child sixteen months old, which she had nursed up to within a week ago. When the baby was four months old the menses reappeared and continued regularly until August 5th, since when they had not recurred. When I saw her on October 9th she stated that about three weeks before she had taken to her bed on account of pain across the hypogastrium and that she had nausea and vomiting. About a week before she began to flow and the blood was very dark, but that she did not pass any clots. On examination I found the uterus about the size of a gravid uterus at the eighth week, but the cervix was small, hard, and the os very narrow. Her condition not improving under treatment, I curetted her on October 11th and removed about two teacupfuls of matter consisting mostly of small, clear vesicles, ranging in size from a pea to a cherry. I experienced great difficulty

in dilating the internal os sufficiently to pass a medium-sized curette and had to redilate it several times, owing to its great tendency to contract. There seemed to be no end to the small vesicles and they continued coming out in great numbers even when every portion of the uterine cavity had been thoroughly curetted, as was evidenced by the grating sound caused by drawing the curette over the surface. I irrigated the uterine cavity with a two per cent. carbolic acid solution, packed it lightly with iodoform-gauze. As the patient had an imperfect union of a lacerated perineum as the result of a primary operation for complete tear, there being no control of the rectal sphincter, I did a Tait's operation on the perineum. So far the patient has done well, has had normal temperature and the perineum seems to be healing by primary intention. The theories regarding the pathology and causation of vesicular mole are many and rather contradictory. The most reasonable is that given by Virchow, that it is a myxomatous degeneration of the chorionic villi due to endometritis. In my case it may be of interest to state that when the patient was four months pregnant with the first child she contracted an acute gonorrhœa from her husband, affecting the vulva chiefly. This disappeared under treatment, and though she had a hard labor having a narrow pelvis, necessitating high forceps, she had an afebrile puerperium. Her husband during her confinement contracted a fresh gonorrhœa, and I have no doubt had sexual intercourse with his wife before he was cured. In fact, I am not certain that he is cured of his gonorrhœa at the present time. Still the woman says she has not had any leucorrhœa since the birth of her child. There are no local evidences of gonorrhœal infection of the genitals or urethra at the present time.

An unusual feature of the case is that the uterus was rather smaller than the normal gravid uterus of the same period of pregnancy. It certainly was not larger, as it is usually described in Vesicular Mole.

Dr. GRANDIN referred to a similar case which he saw last spring. He had seen only two cases of hydatid mole, hence, it must be rather rare. The first case occurred in his student days. In the second case, which was seen last May, a diagnosis had been made by the attending physician of placenta prævia. He was asked to see the case, and he agreed as to the diagnosis and advised the immediate emptying of the uterus. An anæsthetic was administered and the attending physician proceeded to dilate manually and carefully. When he had accomplished this dilatation his hand came in contact with a boggy mass suggesting the placenta, but on passing his hand up into the

uterus to perform version, he was unable to find any foot. No foetus could be found, but instead of this, five quarts by measure of degenerated cystic material were removed. From her history, the patient was seven months gravid, and the uterus reached to the ensiform cartilage. She had been in the hands of two other physicians before this, and they had only employed ergot, rest in bed, and the vaginal tampon. Notwithstanding she was flowing all the time, not one of these other gentlemen saw the importance of emptying the uterus. At the time he first saw her, her pulse was 130, and she was so exsanguinated as to be almost in collapse. Although the uterus was promptly tamponed, the woman died of acute anæmia. It has been stated that in these cases if pregnancy persists after the fourth month, death is the rule.

Dr. MALCOLM McLEAN said he had had two such cases, both of which persisted beyond the fifth month, and both recovered. One of them went nearly to the seventh month, yet she had no severe hæmorrhages until after the fifth month. He at first considered it a probable case of placenta prævia. The whole mass was delivered in one piece; it looked like several pounds of grapes. He had had a third case which terminated favorably at the third month. Although he had had a large obstetrical experience, he had not seen during the past fifteen years, any case like the first one.

Supplementary report on a case of Hysterectomy for Epithelioma of the fundus. Recurrence of the disease in the abdominal wall.

Dr. H. M. SIMS reported such a case. The operation was done about one year ago. The patient, who was about forty-six years of age, had been complaining for some months of profuse uterine hæmorrhages. Her general health had deteriorated considerably, and an examination showed the uterus slightly enlarged, and the os healthy in appearance, but on dilating and removing a small portion from the fundus with the curette, examination of this specimen showed it to be true epithelioma. One week prior to the hysterectomy, the uterus was curetted and packed with gauze. The whole fundus was found to be involved, but the broad ligaments appeared to be healthy. However, they were tied off as a matter of precaution and as much of the ligament as possible removed with the tubes, ovaries and uterus. She recovered nicely from the operation, the ligatures came away within ten days, and she was soon discharged practically well. She reported about once a week for some time; then she returned after about a

month's absence, complaining of a disagreeable vaginal discharge. At her last visit before this, the opening in the vagina was shown by speculum examination to be thoroughly healed. She was again examined, with the result of revealing an opening large enough to admit the thumb. There was a very acrid and rather offensive discharge. Soon after, she complained of some soreness at the abdominal incision, and examination showed a slight pustule at this spot, which he thought might possibly mark a fistulous opening through which a ligature was trying to escape. A probe passed in only half an inch. She came back in two days and then this spot had spread upward about one inch. It was then thought probable that the cancer had returned in the abdominal wall externally. It gradually traveled up the whole line of the incision, and when within about one inch of the top of the incision, it turned off to the left side, and burrowed under the fat. Although thoroughly curetted and treated with chloride of zinc and other agents, it continued to spread. The patient grew steadily weaker, and eventually died a horrible death. He thought the case was unique as regards the manner of recurrence.

Congenital Absence of the Vagina.

Dr. ANDREW F. CURRIER narrated a case of congenital absence of the vagina in a girl of sixteen, who had been under his care. This case was reported by him a year ago as a case of supposed bicornate uterus, from which a large quantity of blood and pus had been removed by him through an opening in the rectum, a false passage being subsequently made where the vagina should be. The tubes which he had placed in this passage had been retained two months and then were removed by the patient's physician. Then followed a repetition of previous experience, painful menstrual colic, no egress for the blood, and gradually enlarging abdominal tumor. The speaker saw her again May 30, 1893, the pseudo-vagina being again obliterated and the uterine tumor as large as an infant's head. The congenital absence of the vagina, the danger of repeating past serious experience if drainage alone were attempted, and the inability in case pregnancy should ever occur, to be delivered without great risk to her life induced me to agree with my friend, Dr. T. M. Bull, of Nangatuck, Conn., through whose courtesy I saw the patient, that the safest and wisest plan in this case was to remove the uterine appendages thus cutting off menstruation with all its accompaniments. This was accordingly done, all the organs removed showing extreme congestion with hypertrophy. The

tissues between the vulva and the uterus were then torn through again the enlarged uterus incised and its contents evacuated. The cervix alone was immoderately enlarged, the corpus being no larger than would be expected in view of the exaggerated nutritive processes of the previous year. Recovery was uneventful. After the patient was able to be about I began a series of dilatations to make, if possible, some kind of a vagina. That all vaginal tissue was wanting was proved by the fact that I unluckily opened the bladder, in the course of one of the dilatations. This wound closed kindly however, and after six weeks of gradual effort I succeeded in obtaining a passage in which she was able to wear a glass tube two and one-fourth inches in circumference and two and one-half inches long. As the tube is removed daily and the passage irrigated, it seemed to me that the result was all that could be desired, and as the patient will be obliged to earn her living she has been relieved of a condition which had previously served as an efficient hindrance.

A case was also narrated by Dr. Currier to illustrate the danger that may attend the operation of curettage, and the necessity of careful control of patients after operation. The patient was a woman of easy virtue, thirty years of age, a sufferer with endometritis, and occasional floodings, also dysmenorrhœa. She had also an ovarian tumor as large as a hen's egg in the left iliac fossa. Some months ago she thought she had contracted syphilis, but her physician concluded that the eruption upon her skin was not syphilitic. She was of hysterical temperament and imperious will. No albumen or casts were found in her urine, and her pulse, though weak and frequent, was perfectly regular and distinct. She was curetted in her room at a fashionable house of public resort September 29th. There was much glandular secretion, and hypertrophy of the mucous membrane and the hæmorrhage was quite free. The uterus was irrigated before and after the operation, and a light gauze tampon was placed within the cavity. The patient declined to employ a trained nurse and was attended by one of her lady friends. The operation was performed in the morning, in the afternoon the patient got out of bed and moved around her room, saying she felt as well as she ever did. Two hours later she complained of intense pain in the uterus and sent for her physician, who sent for me. When we reached her the pain was less severe and was quieted with a hypodermic of morphia and atropia. Temperature and pulse were normal. The second day afterward (October 1) she was visited by one of her lovers and admitted that he hugged and

kissed her and that she felt a rush of blood to her womb. Anything further must be left to conjecture. On the following day she was greatly prostrated, the uterus was sensitive, and the packing was removed. There was no odor to the uterine secretion which was blood alone. The night was a restless one and the following morning, October 2nd, a septic process was evidently in full blast. Abdominal pain, nausea and vomiting, sallowness of skin, diminished urinary secretion combined to produce that ugly picture which the obstetrician and gynecologist shrinks from because it usually finds him so helpless. The patient was kept alive with hypodermics of strychnia, digitalis and brandy and the inhalation of oxygen was begun as soon as I was satisfied of the septic character of the process, for I believe that it is the best remedy we have against poisons circulating in the blood. October 3rd, toward evening, the delirium which had been active ameliorated, a pulse became perceptible at the wrist, and the stomach sufficiently tolerant to allow me to venture the administration of sulphonal, as there had been almost no sleep for four days. This and other measures proved efficient and in two days the patient had rallied enough to abuse her physician and say that "the operation wasn't done right."

I have been thus minute in this description because this operation is ordinarily considered a trivial procedure. It is not trivial. I have known of deaths which followed it, and this case which was narrated came so near death that it is marvelous that she escaped it. Practical points taught by the case are the risks in operating upon public women in public houses, without trained nurses, without the care and precautions which are requisite to good results, and the value of oxygen in septicæmia which should be begun early and used persistently until death or improvement takes place.

DISCUSSION.

"On Removal of the Uterus in Disease of the Uterine Appendages."

(Postponed from last meeting.)

In the absence of Dr. Polk, Dr. BACHE EMMET gave a summary of Dr. Polk's paper as he understood it. He said that Dr. Polk had been practicing conservative surgery in the treatment of disease of the uterine adnexa, by saving as much as possible of the ovaries and tubes. He had even tried to make the stump which was left available for future conception. He reported cases in which menstruation was continuous. With the idea of attacking those cases in which the disease is very

much more serious, namely, those in which one cannot be sure that the entire pus surface is removed he thought it best not to leave even the stump, but excavate it from the cornu of the uterus in view of the possibility of a small portion of the disease remaining and developing into a fresh salpingitis. Again, as the uterus, being a glandular structure, might also become diseased if left, being in the neighborhood of the tubes, he advocated its complete removal. He represented that it was so simple an operation that it should always be done under these circumstances. He also concluded that he would advocate abdominal removal of the uterus in all cases of carcinoma hitherto attacked by the vagina. He gave the technique of the operation, as practiced by himself and others.

Dr. EMMET said he would be glad to hear corrections from others who had heard the paper, if he were in error.

Dr. GOFFE said that the remarks just made dealt only with the tubes, whereas Dr. Polk, although advocating the removal of the entire tube, favored leaving as much healthy ovarian tissue as possible, and it was only when both ovary and tube were destroyed beyond hope of repair that he removed all of the ovarian tissue.

Dr. EMMET called Dr. Goffe's attention to the fact that there could be no purpose in leaving a portion of ovary if the uterus were to be excised.

It was then ordered that the discussion be confined to hysterectomy for disease of the uterine appendages, as stated in the announcement of the meeting.

Dr. J. E. JANVRIN opened the discussion.

The question raised by Dr. Polk in the paper which he presented to the Society two weeks ago, is this: Is it the proper thing to remove the healthy uterus when in any given case we are removing diseased tubes and ovaries? Or to put it upon a little broader basis. Is there any reason, present or speculative, which can justify us in removing a healthy uterus when we have *only* diseased appendages to deal with? This question I take it is intended to apply as a general rule, if adopted and in all cases my answer to it would be: First, That it is altogether too sweeping, and that in nearly all cases of diseased appendages it should not be thought of; secondly, that in those cases in which the diseased condition affecting the tubes or ovaries is (as far as we can determine) of a malignant character the removal of the uterus is justifiable; and, thirdly, that there are a few cases in which (where the dis-

eased condition of the tubes and ovaries is of such extent that these organs cannot be removed without inflicting too great damage upon the uterus) it is far better to extirpate the uterus also.

In defense of these propositions I would say that although the larger number of cases of catarrhal and purulent salpingitis certainly and probably also the larger number of cases of inflammatory exudations, adhesions and contractions in the pelvic cavity around the uterus and its appendages are the direct result of an endometritis extending to the appendages, still this endometritis is capable of cure, either by a moderate amount of preliminary treatment and curettage and drainage at the time of the removal of the appendages, or if an absolute cure (of the endometritis) is not effected in this way then a moderate amount of after treatment will, I think, always bring about a perfect cure in a short time. In my own experience it has not been infrequent to meet with such cases, and I have yet to see the case which has not yielded to a moderate amount of after treatment.

This view of the situation, I think, is truly conservative and at the same time takes in all that is *demand*ed in the ordinary cases of removal of appendages for disease, the result of inflammatory processes.

Dr. Polk has stated that there are many cases in which the pathological changes in the lining of the tubes are so great and so thoroughly diffused into the proximal ends of the tubes that even if the ligature is applied close to the uterine wall still sufficient of the tube is left to act as a nidus for keeping up an endometritis, and a consequent tender and sensitive condition of the uterine body. I have never met with such cases or, if I have, at least I have never *recognised* them. The eighth of an inch of tube remaining as a stump very naturally undergoes a certain amount of shrinkage, and, as a result, within a few weeks after the operation, there is not only no protusion of this stump from the uterine wall, but in most cases an absolute disappearance of the stump, the peritoneal covering of the uterus being perfectly smooth and flat.

But even if the statement made by Dr. Polk holds true in some cases I see no reason why we should try to anticipate it by removing the uterus, unless the diseased condition has really *infiltrated into the uterine wall*, and we know such to be the case at the time of the removal of the appendages. If, on the other hand, the inflammatory process even in cases of pyosalpinx, is still confined to the *lining* of the proximal end of the tube as it passes through the wall of the uterus there is no reason, to my mind, for removing the uterus.

It is a well-known fact (and too much honor cannot be given to Dr. Polk for his careful and patient work in helping to establish this fact) that in many cases of not only catarrhal but also purulent salpingitis, a thorough curettage of the uterine cavity, combined with thorough drainage for a week or ten days following by means of the iodoform-gauze packing, very frequently cures the trouble. Such cases have quite frequently been reported to this Society, and my own experience and observation bear me out in making the assertion. I am aware that this point has been denied by some of our friends across the Atlantic, but it seems to me that the denial simply shows that they have not had the good luck to meet with such cases. With such a fact well proven it seems to me that in *almost every case* in which, after the tubes and ovaries are removed, there remains an eighth or even a quarter of an inch of tube which is diseased, this condition is *almost absolutely* sure to yield to the curettage and drainage done at the same sitting. In addition to the foregoing there is another and, I believe, just as weighty argument against this proposed hysterectomy (excepting under the circumstances which I have mentioned) and that is that the uterus has been made a part of the pelvic contents not only for the purpose of assisting in the menstrual functions and also furnishing a home for the foetus during its growth, but also to furnish to a great extent the floor upon which the intestines normally rest. I do not believe that the artificial floor resulting after a hysterectomy is as good a piece of mechanism as that originally planned by the Creator. We cannot easily improve upon the original and for this as well as other reasons it is best to "let well enough alone" and be content to leave the uterus *in situ* unless the conditions are such as to *demand* its removal. A few words as to the conditions really demanding the removal of the uterus at the same time with diseased appendages.

Should the complications arising during the removal of the appendages be such as to result in injuring the peritoneal surface of the uterus seriously, *i. e.* to such an extent that its repair is a matter of doubt, or should any other complications arise which can be more readily and easily dealt with by removing the uterus than by attempting to repair damages, in such cases certainly it would be the better surgery to remove the uterus together with the appendages. In this class of cases we would include more especially broad and strong adhesions which we so often meet with in ovarian and broad ligament tumors of long standing.

As to the propriety of removing the healthy uterus in cases of

malignant disease of the appendages. The development of cancerous or sarcomatous disease in the tubes and broad ligaments is rare, not so rare, however, as we supposed even four or five years since. The first case on record was reported by Sanger in 1886. The second case is one in which in January, 1889, I removed a tube which was of "myxosarcoma" type, and presented the specimen at a meeting of Obstetric Section of the Academy of Medicine during the following month. This case, together with two others which I had met with, formed the basis of a paper which I read at the meeting of The American Gynecological Association at Washington in September, 1891, and which was entitled "A Clinical Study of Primary Carcinomatous and Sarcomatous Neoplasm Between the Folds of the Broad Ligaments." Up to that date I believe these four cases formed the whole number reported. In this year's September number of *The American Journal of Obstetrics and Diseases of Women* I see that Dr. Charles Dixon Jones reports three cases of myeloma (sarcoma) of the tubes.

The development of malignant conditions in the ovary itself is of course much more frequent. Inasmuch as a malignant disease located in any organ is prone to extend to the surrounding glandular structures it seems to me that when we remove the appendages on account of a malignant condition which is confined to them, it is a very wise precaution against possible future extension of the disease to the uterus to include its removal also in the one operation. At the present time our statistics on this point are altogether too limited to enable us to form a perfectly reliable opinion, still my own decision would be to remove the uterus as well as the appendages in all cases of celiotomy for removal of presumably malignant disease of the appendages.

Dr. CLINTON CUSHING, of California, being invited to participate in the discussion, said he must be classed with the conservatives. He believed it better to take away as little of the body as is necessary to effect a cure, and he quite agreed with Dr. Janvrin that unless malignant diseases exists, we should allow the uterus to remain for the reasons already given. He thought the rate of mortality would always increase with the amount of surgery done.

It had been stated that the diseased uterus might be left behind. It appeared to him that disease of the cavity of the uterus other than malignant is very easily and successfully treated after the removal of the tubes, for the congestion is then relieved. As far as the re-

moval of the uterus for malignant disease is concerned, he thought it was generally conceded that it should be removed with the tubes. He cited one instance where there was a sarcoma of the posterior wall of the uterus, and a well marked epithelioma of the cervix which he removed four years ago, and the woman remains perfectly well at the present time. Microscopical sections and the original specimen have been kept, and verify the diagnosis of sarcoma and epithelioma. It is an additional evidence, therefore, of the possibility of an absolute cure in this class of cases.

Dr. FLORIAN KRUG said he had listened to Dr. Polk's paper at the last meeting with much interest, the more so as he was himself preparing a paper on this very subject. His own views accorded very well with those presented in the paper under discussion. It is about a year since he did his first operation of this kind, and he now has quite a long series of these cases. He was first led to think of this method by comparing the way his cases of fibroid uterus with total extirpation healed up without untoward symptoms, and the healing of bad cases of pyosalpinx and ovarian abscess. The latter caused much anxiety and trouble, and presented a sharp contrast to the fibroid cases. We may report many cases of removal of pus tubes and ovaries as recoveries, still, if these patients be followed sufficiently long, it will often be found that they are not really cured. Although there may be no inflammation or induration around the stump, the patient nevertheless complains of pain. Some of these cases will continue to have menorrhagia. Now, what is the cause of all this? It is simply that the diseased uterus which was the original cause of the trouble still remains. At the time of the operation the entire diseased endometrium may have been removed by curettage, and yet the germs may have traveled further along, and have escaped removal. Moreover, if the tube and ovary are very adherent, the operation has usually inflicted more or less injury on the posterior surface of the uterus. Then, these cases often require abdominal drainage, and this introduces another disturbing factor. He had not been as fortunate as had Dr. Janvrin in curing every case "*by a moderate amount of after-treatment*;" he had employed it very persistently in some cases, and yet had ultimately been compelled to extirpate the uterus. He began his present investigation by treating one series of cases by simply removing the pus-tubes and ovaries, and another series by removing the uterus at the same time. A comparison of the subsequent his-

tories of the two series is very convincing as to the superiority of hysterectomy. In the hands of the experienced operator, not more than eight or ten minutes additional time is required to take out the uterus after one has tied off the tubes and ovaries. It does not add to the shock, and *an absolutely useless, but by no means harmless* organ, is thereby removed. Therefore in the hands of a competent operator, it is a desirable measure; it can be sometimes done in a shorter time than would be required for the removal of the tubes and ovaries alone, because not so much time is consumed in a tedious dissection of the adhesions to the posterior surface of the uterus. He therefore fully endorsed the views expressed by Dr. Polk, and he felt sure that in a few years the until now accepted opinions on this subject would undergo a radical change. He had yet to see a case where the uterus was entirely healthy and yet there were pus-tubes and ovaries.

Dr. A. PALMER DUDLEY thought the subject had already been well discussed pro and con. He would not feel justified in removing the uterus under the circumstances mentioned in the paper, unless he could truthfully say that he would advise it in the case of one of his own family. At present he would prefer to subject such a person to abdominal section alone for the removal of the tubes and ovaries. Perhaps it was because he had not the requisite operative skill, but he did not consider the removal of the uterus such an exceedingly easy matter as the last speaker implied. The uterus is by no means useless, it has a purpose aside from holding the fœtus, in that it is a support, and we should not deprive a woman needlessly of this. He admitted that there are many cases where the removal of the uterus is justifiable at the same time that the operation is done for pyosalpinx, but with the advantages given us by the Trendelenburg posture it did not seem to him very difficult to ligate the adhesions between the tubes and ovaries and uterus, and separate them without destroying the peritoneal covering of the uterus to any great extent. If the prosalpinx extends into the uterine cavity, and the horn of the uterus is distended, there may be occasion to remove the uterus at the same time. We should not say the condition is the same in fibroid tumor of the uterus and in pyosalpinx; they are not to be compared, for a large fibroid tumor makes the operation much easier.

Again there is a little inconsistency between the author's present paper and a previous one on drainage, for in the latter he claimed a good deal in the way of curing pyosalpinx by drainage of the uterus, whereas now he proposes the removal of the uterus because there is

pyosalpinx. This is straining the point a little. Personally he would prefer to save the uterus for the sake of saving the continuity of the pelvic floor, if for nothing more.

It was voted that the discussion be continued at the next meeting, and that Dr. Polk be requested to open the same with a *resumé* of his views on the subject as had been expected at this meeting.

TRANSACTIONS OF THE NEW YORK ACADEMY OF
MEDICINE, SECTION OF DISEASES OF WOMEN AND
OBSTETRICS.

Stated Meeting, October 26, 1893.

Dr. BOLDT in the chair.

Dr. EDWARD P. DAVIS, of Philadelphia, read the following paper
on

Abstract of paper entitled

TOXÆMIA OF PREGNANCY: ITS DIAGNOSIS AND
TREATMENT.¹

By EDWARD P. DAVIS, A. M., M. D.

Definition of the term toxæmia of pregnancy as a condition in pregnant woman in which excessive toxic material is found. No nutrition without waste, so that dual existence in the pregnant woman's body makes additional waste-product natural. Excretion effected through kidneys; physicians first notice such cases where kidney-failure is a prominent symptom: as knowledge of pathology increases, kidneys are seen to be but partly involved, and further investigation is needful.

The production of toxines, or poisonous waste, not fully understood. Metabolic processes account for portion of material present, while some cases show intoxication with bacteria-products. It is proposed in this paper to consider methods of clinical investigation found useful in diagnosis of toxæmia; to cite agencies efficient in treatment, and to report illustrative cases.

¹ (Read before the New York Academy of Medicine, Thursday, October 26th, 1893.)

Unnecessary to refer to methods of examination commonly used in clinical investigation of action of kidneys during pregnancy.

Very important to estimate amount of urine secreted; this is easy in hospitals, but requires ingenuity and patience in private cases without trained nurse. Microscopic examination of urinary sediment invaluable in study of pregnant patients. In cases forming basis for this paper, the urine has been examined for specific gravity, color, reaction, presence or absence of albumin, glucose, lactose and urea. Most important constituents are urea and sugar or acetone.

Method of examining for urea based on action of bromine upon sodium-hydrate; the Lyons urinometer employed. Amount of urea in urine during pregnancy indexes amount of waste secreted by patient. Literature of subject proves that solutions of urea may be injected into animals without causing convulsions; patient also may endure temporary suppression of urine, (almost complete), escape convulsions, and recover; still percentage of urea in urine of pregnant woman indicates efficiency of her kidney-excretion. Percentage should be estimated before and after labor, and if below one-fifth, patient's excretory processes should be stimulated.

Eclampsia may occur while urine shows little abnormality except deficiency of urea. Case quoted where woman of nineteen was pregnant first time; seen in ninth month; foetus in first position. Patient's legs oedematous, tense, pitting on pressure; right labium size of orange; frequent micturition; constipation; great discomfort. Ordered saline purge daily, and Basham's mixture as tonic. Was seen first June twenty-first, at home; later on June twenty-fifth, in labor. Consented to go to hospital; brought to Maternity in ambulance. Labor rapid, though head remained on perineum for one hour; labia very oedematous. Child female, six pounds, healthy. Labor ended 9.40 P. M.; at 1.40 next morning, convulsions occurred; treated by hot packs, chloral and bromide, digitalis, calomel, etc. Convulsions continued; death fifteen days after delivery. Post-mortem impossible. Urine examined during time of eclampsia before eliminative treatment modified condition.

Microscopic examination showed urine with few leucocytes; amorphous urates; a few crystals calcium phosphates. Later, leucocytes disappeared; Bacteria present; in first slide, *one* compound granular cast. Six examinations. Urine simply that of ordinary pregnant woman with lower percentage of urea. Fifty-four cases, with total of 341 examinations, gave average percentage of one and eight-tenths. In

majority, urea increased after delivery, but marked diminution in urea found only in cases with, or threatened with, eclampsia, or showing marked toxæmia. Symptoms of toxæmia calling for active treatment were gradual diminutions in solid and liquid excretions; diminution of appetite, slight nausea or gastric trouble; headache, clammy skin, or dry skin with deficient perspiration, lassitude mental and physical. Patients all did light housework until labor occurred, so that lassitude could be observed. Case just described entered Maternity already in labor.

Presence or absence of serum albumin not held to indicate toxæmia. If microscopic examination of urine showed casts and epithelium, presence also of albumin significant; Eshbach's albuminometer convenient and accurate; when microscope failed to show pathological elements, yet albumin was present, not held important. In one-half of patients sugar was present at irregular intervals during pregnancy and puerperal state, in small quantity, usually as lactose or glucose. Most useful test for this is fermentation; subnitrate of bismuth and Fehling's solution valuable adjuncts. Presence of glucose and lactose bore no direct relation to patient's toxic state. Lactose more abundant as secretion of milk occurred. In toxæmia cases glucose was present, and possibly acetone would have developed, but for stimulated excretion.

The relation of bacteria and their products especially interesting concerning toxæmia in pregnant and puerperal state, in connection with pathological condition. Case cited as illustration:

Colored servant woman, illegitimately pregnant second time. Admitted to Maternity, April 16th, and did household work in apparent health. Urine normal. Examination of genital tract proved former gonorrhœa; no acute process present. Delivered May 13th, after spontaneous labor of twelve hours. Laceration of mucous membrane; douched with bi-chloride of mercury solution $\frac{1}{1000}$, and dusted with iodoform. Child, female, six pounds, four ounces; good condition. Placenta remarkable for abundant calcareous material. Patient's state normal until seventh day after delivery; chill; temperature 105.2 F. Urine examination soon after delivery showed pus. Bladder douched with creolin mixture, and salol given internally. Soon after chill, uterus curetted with douche-curette; no evidence of septic process in uterus or vagina. Uterus not tender; slightly enlarged; abdomen not swollen; no evidence of pelvic inflammation. Urinary tract seemed seat of bacterial invasion. Urine acid in

reaction; pus. Percentage of urea nearly normal; traces of sugar; considerable albumin. Results of examination of urine appended in table.

Microscope showed on all examinations large numbers of pus-cells. Granular, hyaline, and a few blood casts. Epithelium from bladder, with a few cells from kidney. Patient died of exhaustion on 27th day after birth of child. No enlarged kidney felt by palpation, nor sign of abscess in pelvis, abdomen, or kidney.

Post-mortem showed uterus, tubes, and ovaries normal. Both kidneys much enlarged. Capsules adherent; ureters and bladder thickened indicating chronic inflammation. Microscopic examination of kidney showed acute parenchymatous nephritis.

Scrupulous antiseptic precautions taken in this case, as in all; no similar case in Maternity at the time. Believed that germs from previous gonorrhœa, lodging in urethra or bladder after labor, invaded ureters and kidneys, causing fatal nephritis. The symptoms were clearly those of ptomaine intoxication. Patient never rallied.

Another case of toxæmia with threatened eclampsia was terminated by suitable treatment, and by prompt induction of labor. The patient white, was pregnant eight months. Had borne several children; had former "kidney trouble." Pale, anæmic; headache, disordered vision; swelling of feet and ankles. Urine showed much albumin; diminished urea excretion; urine showed large number of red blood disks, with epithelium from tubules of kidney, and granular casts. After free purgation and hot bath, labor was induced; delivery of living child. Patient relieved, and soon convalescent. Microscope more valuable agent in this case than any other.

A second case, a woman, entered Maternity partly intoxicated, thought by police to be in labor. Deficient excretion; percentage of urea less than normal; nervous phenomena described in foregoing cases. Labor induced, complicated by false position of head which lodged with parietal bone against brim of pelvis. Given chloroform; podalic version performed. Mother and child recovered well; mother left Maternity in good health.

Toxæmia of pregnancy results after puerperal period in marked anæmia; case of patient showing persistently defective excretion at this time. Child died of pulmonary catarrh; mother transferred to hospital for extended treatment.

Sometimes marked toxæmia is present when urine fails to show casts, albumin, or marked deficiency in urea. A primi-gravida, wife of

a physician, intelligent, had attacks of epigastric pain; this pain occurred irregularly; often worse at night; no nausea or vomiting. Patient's bowels moved daily; legs not swollen; urine secreted daily had gradually diminished unnoticed.

Microscope showed considerable shedding of epithelium similar to that seen in fevers; most cells from bladder, though a few from ureters. Cells pale; many degenerated. Uric acid abundant. A form like old granular cast broken down. A few oxalates crystals.

A large number of ammonia urate crystals and uric acid. No casts; a few epithelial cells. Nothing pathological.

Pronounced nervousness, great melancholia. Skin slightly dry; tongue clean; poor appetite; craving for meat. Husband requested writer to see his wife. Careful examination diagnosed toxæmia. Urine showed deficiency in quantity. Patient given 2 1-2 grains calomel, 10 grains soda nightly; next morning compound colocynth pill of pharmacopeia. Milk diet; warm or hot bath daily before retiring. Woolen underclothing worn. In less than forty-eight hours after attendance, marked improvement. Urine increased; free movement of bowels; less pain; nervous condition better; appetite not satisfied with milk. Urged to be in fresh air constantly; diet made to include fish, oysters, milk, bread and fruit. Warm bath at evening; colocynth pill and occasional calomel given as necessary. Week from time first seen, symptoms entirely gone; this patient's mother perished from eclampsia at her birth. This case, without prompt attention, could easily have resulted in eclampsia.

Treatment of toxæmia must promote action of the excretory organs, namely, kidney, liver, intestine, skin and lungs. Pure water recommended in diet, but not in excess. Tea to be avoided; diuretic effect of coffee sometimes good. Literature indicates that liver has much to do with producing this condition. The occasional use of calomel and soda desirable, followed by purgative. Salts of potassium to be avoided as irritating. Colocynth highly recommended. Bath and pack useful for promoting excretory action of skin. If hot bath depresses, warm bath, with ingestion of a little hot water is good, just before retiring, to avoid cold. In severe cases, pack in sheets wrung out of hot water, or hot-air bath, indicated. Moderate lingering toxæmia is best treated by gentle massage, including limbs and back, but avoiding abdomen. This at night, followed by bath, often secures sleep.

Fresh air summer and winter very important.

Diagnosis of toxæmia must refer especially to patient's nervous system as the condition differs largely from simple nervousness in pregnant patient. Case quoted of woman who entered a hospital with eclampsia, and recovering, knew nothing of her entrance to the institution; was as completely intoxicated as if drugged with alcohol or opium. Mania is often present in such a condition.

Clinical picture is that of intoxication showing in disordered nervous system. Nervous phenomena and diminished excretion cardinal symptoms of this condition. Upon these are based diagnosis and treatment. Sedatives and narcotics are bad: elimination is the great need, and its sedative effect remarkable.

In face of threatened eclampsia, prompt emptying of uterus is indicated, with chloroform used as anæsthetic at labor. Recent literature of eclampsia urges value of ending pregnancy by dilating uterus and removing fœtus, under anæsthesia, and with antiseptic precautions. Pilocarpine to be avoided as depressing and favoring œdema. Stimulation best accomplished by alcohol, digitalis, and when eclampsia occurs after labor has ended and exhaustion threatens, in the hypodermatic use of strychnia.

DISCUSSION.

Dr. W. T. Lusk. I fully agree with the author of the paper as to the treatment, but it seems to me that the term "toxæmia" is to some extent begging the question. Whether all the symptoms which are influenced by the eliminative treatment are due to the storing up of poisons in the blood is a thing that remains to be proven. Many of the symptoms he speaks of belong to the non-pregnant, as well as to the pregnant woman, and the treatment given for these cases would be equally beneficial. I am glad to see the Doctor come out in favor of prompt measures in these cases of convulsions. I was educated to believe that we ought to remove these dangers entirely by treatment, and that you were taking a great risk when you attempted to induce labor and empty the uterus, and I sat by and watched the patients die when the treatment was carried on. I ventured to try vigorous purgatives, and during the time when temporary relief from the symptoms was obtained, to empty the uterus, with a result which has been satisfactory to me. We have no positive evidence as to what is the cause of the symptoms. We all know that there is an extraordinary connection between the suppression of the functions of the kidneys and the production of eclampsia, but we also know perfectly well that

we can have complete suspension of the functions of the kidneys and still not be followed by convulsions. As a matter of treatment, it is true that if we empty the uterus in a large majority of cases the symptoms will disappear. Few of these minor forms have come under my personal observation, and they must be studied in a large lying-in hospital, for in general practice they are extremely limited in number.

Dr. C. A. VON RAMDOHR. As Dr. Lusk observes, we have no absolute knowledge of the cause of eclampsia. It is impossible either to bring ourselves to believe that it is due to mechanical causes only, such as pressure on ureters, veins, or nerve centres, be that pressure due to the uterus itself or to the ever-present hydræmia and increased arterial tension, nor can we always claim kidney disease as its cause. Again, we must remember that frequently in advanced forms of kidney disease we have no attacks of eclampsia. The changes in the kidney, when death occurs due to eclampsia, are not the only ones, however, and like the changes we find in the liver, and in the mucous membrane of the alimentary canal, and of the respiratory tract, consist mostly of blood extravasations and tissue necrosis. There seems to be a certain similarity between these signs and those known to be produced by certain poisons, such as the poisons of venomous reptiles, of phosphorus, and of lead. Whether the suppression of urine is primary or secondary in eclampsia is questionable. In such a case as snake poisoning there would be no question. It has been proved and demonstrated that substances can be brought over from the foetal circulation into the maternal tissues, and that they may be subsequently found in the urine, and hence it is certainly possible to believe that this toxæmia, which took its origin from some toxic substance (ptomaines (?) or bacteria) the result of morbid tissue changes in the placenta, may be the cause of eclampsia.

Certain women will stand a greater amount of poison than others, and certain women seem predisposed to this trouble and their nervous centers are more easily excited. Those cases which have light attacks are the class which most easily recover. The unfavorable cases go into a stupor and die either as the effect of the poison or because the process of respiration has been suspended for too long a period; indeed, under certain circumstances they swallow their tongues and die directly of strangulation. One thing seems certain; the more placenta there is, as in triplets or twins, the greater there is the chance of eclampsia. We also know that when the foetus dies and there is a stoppage of the interchange between the placental blood and the

maternal circulation, the woman stands a better chance than if the child stayed alive. Therefore, it is certain, and clinical experience bears us out, that if the foetus is removed the chances of the continuance of the attacks are lessened and the quicker she is delivered under such circumstances the better for her. The medicinal treatment itself, whether it be chloroform or blood-letting, or any of the numerous plans suggested, seems to me to be somewhat immaterial. All the greater care should be given to the prevention during pregnancy. As a matter of fact, chloroform will stop the attack for the time being, and be a valuable help in the quick delivery demanded. It certainly seems to me that blood-letting is not such a bad plan, for by it we get rid of a certain amount of infectious material if we adhere to that theory, relax some of the overcharged vessels, thereby reducing the pressure on the brain.

If the os is not fully dilated, Dührssens deep incisions, though they are descried by some, are of the greatest value. There is no means by which we can secure a quicker and more surgeon-like dilatation. If the attacks persist after the uterus is emptied the prognosis is usually just so much worse. My mortality is about fifty per cent., but most of the cases were of a very severe type and seen in consultation. As far as prognosis is concerned I have only seen one woman recover who had more than three attacks post partum.

Dr. GRANDIN. My experience with the special class of cases described in the paper has been of a limited nature. Since hearing the paper I think this is due to the fact that I have overlooked such cases. I now recall cases in which I am satisfied to night that death was due to these obscure forms of toxæmia. I remember particularly well a case brought into the emergency hospital in convulsions. The uterus was emptied, and she promptly passed from coma into death. Repeated examinations of the urine had failed to reveal the slightest albumen. There were no casts, the specific gravity was practically normal, but the urine was not tested for urea, nor was toxæmia taken into account as a possible cause of death. The paper is to me particularly valuable in calling attention to the necessity for a more careful examination of the urine of the gravid woman. We should not rest satisfied in determining the presence or absence of albumen, but in the future, when obstetrics becomes what it ought to be, a specialty, we will have time to test for urea and for other toxic agents in the urine. I am greatly interested in the remarks Dr. Davis has made in reference to an impending or present eclampsia. When a few years

ago I had the temerity to endeavor to resuscitate an operation which had been condemned from the dark ages, the *accouchement forcé*, I was criticised most severely by gentlemen in different portions of the country, and yet to-night I find a distinguished teacher in Philadelphia and also a distinguished New York teacher, advocating the same measure in the presence of impending or actual eclampsia. I am satisfied that we have in the *accouchement forcé* a method which affords the best results as regards the life of the mother and the saving of the child. I am opposed to morphia. I see no use in sitting by a bedside and administering ether or chloroform, particularly ether, which we all know affects the kidneys badly. What I do is to make eclampsia the reason for an operation. I go to the patient with an assistant. Anæsthetize the case, empty the uterus, and if the pulse be strong I let the woman bleed. I do not care whether it is necessary to incise the uterus so long as my incisions do not extend beyond the cervix.

Dr. EDGAR. I desire to thank Dr. Davis for one point in particular he has made so plain in his paper, and that is the fact that we may have an eclamptic seizure in a woman whose urine shows no albumen, where the specific gravity is practically normal, and as far as we can tell during the short observation, where there has been no diminution in the quantity of urine. This fact was brought to my attention very forcibly last spring, when I met with two such cases. One of these was a case in which the woman was in coma when I arrived. The second stage of labor had been completed, as well as the third. Repeated examination of the urine showed it to be of about a normal specific gravity; by no test could we find albumen; urea was not tested for; the quantity within that three hours was, with the help of diuretics, eight or ten ounces; and yet the clinical picture presented in this case was one of puerperal eclampsia. An autopsy was performed, and the report was that there was some slight change in the kidneys, but so slight that there was doubt concerning it. Another case I saw was practically the same. She was in coma at the time. A good deal of urine was drawn from her bladder; tested repeatedly for albumen and none found, yet she went into convulsion after convulsion and died. As regards treatment I take my stand on the side of those who believe in the immediate emptying of the uterus. I see no reason why the woman in an eclamptic seizure should not be placed under chloroform and the *accouchement forcé* be performed. I consider it a life-saving method.

Dr. MURRAY. I believe, as has been said, that it is useless in

the majority of cases to temporize with a serious case. There are a great number of these cases that do not show albuminuria. I believe the proportion of albuminurial cases in pregnancy is five to seventeen per cent. The proportion of eclamptic cases is only about one out of 200 or 250. But there still are a large number of cases that are toxic and that can only be carried through by very careful management. When eclampsia comes on, controlling the spasms by chloroform and emptying the uterus I believe are the only methods at all satisfactory. I have always thought that the introduction of forty to sixty grains of hydrate of chloral into the rectum is very dangerous, because when introduced into the mouth twenty grains have been known to kill.

Dr. JACOBI. Dr. Davis made one remark that has not been commented upon by those who have spoken so far. I noticed for a particular reason that he advised in these cases of toxæmia that no preparation of either medicine or food containing potassa should be given to the patient. That remark struck me, because the only person that I have ever heard speak of potassa as being dangerous in any condition threatening convulsion is Bouchet, in his new and very brilliant researches on auto-intoxication. Professor Bouchet has really, I think, shown us the way we should look at the relations of the kidneys to constitutional poisoning. Instead of saying that the organism is poisoned because the kidneys do not act, Bouchet states that there are four conditions existing in every organism which will result in death by auto-intoxication in the course of exactly two and-a-half days unless the kidneys are entirely adequate. He has shown that the injection of a very large quantity of urine into the veins will not be followed by death. The toxic power of urea seems to be the smallest of all the constituents of urine. Bouchet enumerates these four conditions: On the one hand, the poisons which come from the food directly, among which potassa, as existing in such abundance in meat, gives at least one key to the danger of meat in these cases; second, the putrefaction of the intestines and the absorption of the putrefaction; third, the bile, whose toxicity is nine times as great as that of the urea; and the fourth is the toxic agents that are constantly being produced by the life of all the cells of the organism. Indeed, it is this last cause of toxicity that seems to me particularly interesting in the conditions that are under discussion. I think one of the speakers made the observation that the ordinary nutritive metabolism of the foetus was being added to that of the mother in a pregnant woman, and if it were not so it would be difficult to under-

stand the great value of emptying the uterus, upon which every speaker has insisted, because certainly if the danger consisted in a nervous irritation the forced labor would be supposed to increase that danger. It is well known that when the foetus dies the symptoms very generally disappear. That prevents the blood of the mother from being charged with the products of the metabolism. Now, Bouchet's theory of this thing has not been left at all just in a state of theory. He has experimented on the toxicity of the urine in a very precise manner. I do not think he has experimented on the urine of pregnant women. He injects a certain amount of urine into the veins of a rabbit, and he uses the marginal vein of the ear of the rabbit, and makes the injection with a hypodermic syringe. I have frequently experimented myself, and find it simpler to make the injection into the jugular vein. But he takes the weight of the rabbit and has found in a considerable number of experiments that the normal urine will be toxic in the proportion of from forty to sixty cubic centimeters per kilo of the rabbit; and if the kidneys are not adequate, if they are not excreting all the poisons which are constantly accumulating in the blood, the toxicity of the urine will be correlatively diminished, so that instead of a maximum of sixty cubic centimeters being required per kilo it may be necessary to take 100, or 120, or even more. This constitutes an exquisite test for the action of the kidneys, which I think is entirely new, and which would certainly be exceedingly appropriate to just such actions as those that Dr. Davis has described. While it is true that a diminution of the urea indicates a certain diminution in the excretory power of the kidney, it certainly is not a perfect guide to that, because there are a great many other substances that are excreted in the urine, more poisonous than the urea, and it has been shown that urea may be excreted in a sufficient quantity and yet the patient die of poisoning. Now, this test is not very much more difficult to apply than the hydrobromide test for urea, and it seems to me that it would be more valuable. I may add one case to the clinical cases that have been quoted, where toxæmic symptoms existed without the urine being at all altered, and yet there was unquestionably renal disease. The case was particularly under my charge in the country, where in two pregnancies in succession the patient began to have uterine contractions about the fifth month of pregnancy, with discharge of water. I suspected that this was due to a certain amount of toxæmia, although in that case the urine showed no alteration. I repeatedly examined it for urea. She was put to bed and put upon a milk diet. It was very desirable that a

miscarriage should be prevented until the child should be viable, and she was taken care of until the child was seven months, when it was delivered. She never up to this time has shown any ordinary alteration of the urine. She has now completely recovered.

Dr. BUCKMASTER. He understood Doctor Jacobi to say that no attempt had been made to supply the method followed by Bouchet to eclampsic women. He thought that observations made in this direction would prove of great value and suggested that the members of this section should try to settle their value. The discussion by Doctor Jacobi was very suggestive. He wished to put himself on record as being opposed to *accouchement forcé*.

Dr. AYRES. It is a startling fact that the statistics of eclampsia show that the great majority of cases appear in primipara, where we would least expect to find it, because they are young, and healthier, and freer from disease. In seeking for an explanation of this we are led to consider the fact that in primipara there are certain conditions present that are not present in others, by which greater interference occurs with circulation in the region of the pelvis. The abdominal walls are thin. They relax only in response to a certain degree of upward pressure on the uterus. They therefore afford a resistance and must tend to press the uterine body and its contents deeper down into the pelvis. It is also a startling fact that almost all cases of eclampsia occur in head presentations. These facts, it seems to me, render the consideration of the view that there is a mechanical obstruction a very plausible one. It is a well-known fact, for instance, that a very slight pressure on the ureters will suppress the flow of urine. These conditions that I have mentioned tend to interfere with the general circulation, and also with the kidneys by their pressure upon them. I have undertaken in the few opportunities that I have had to test this matter, and it occurred to me that if we could in certain cases perform external version previous to the attack of eclampsia we could lessen the conditions that were tending to develop it. In two cases I have done so—cases in which there was albuminuria present to a considerable degree, and this albuminuria diminished greatly without any medicinal administration whatsoever. I have used nitro-glycerine in six or seven cases with such satisfaction that I want to emphasize its employment. I also want to say that I am in thorough accord with the views here to-night as regards rapid delivery.

Dr. PRYOR. It seems to me, Sir, that Dr. Jacobi has come as near the mark as is possible in the present state of our knowledge. I may

be pardoned for expressing somewhat the same ideas he quotes from Bouchet when I say that I consider these cases merely cases of "retention toxicosis." Certain of them have temperature, high pulse rate, with peptones in the urine; such are septic. Others may or may not have temperature, have a pulse rate entirely in disproportion to the temperature, and urine in which no peptones can be found; such are toxic. A woman with emunctories of a certain fitness conceives and these emunctories are asked to do increased work. They fail and the symptoms of retention of one sort or another appear. There may or there may not be albumen in the urine, and the urine may have a proper percentage of urea. Disease of the kidneys here presents identically the same symptoms as in the male and no more. But to such symptoms of Bright's are added the other symptoms of retention toxicosis. So you may have only one symptom or all of them present. These cases are merely cases of lack of balance between tissue waste and waste elimination, with possibly disturbed kidney function. It is surely the proper treatment to prevent such waste elimination by exciting the emunctories; skin, liver and kidneys. In the altered conditions of life under which our women carry and bear children, living as they do largely upon animal food and with improper physical exercise, it is remarkable that more of them do not suffer from this "retention toxicosis." Examination of the urine alone, will not suffice to detect the onset or presence of this condition; the albuminous precipitate may not be found. But the facies, the mental state, the psychic manifestations, the temperature, the pulse, must all be carefully scrutinized to determine whether the economy be in a normal state. Those cases are not merely cases of "absence in urine" in the pregnant woman; they are much more than that. Mechanical pressure plays but a small part in producing the condition or its symptoms. Doctor Ayres states that almost all cases of eclampsia occur with head-presentations. I may remind him that almost all presentations are of the head.

DR. PEARSALL. I read a paper before the General Section of the Academy of Medicine over a year ago on this subject, in which I advocated the views of the author of this paper. It seems to me that the various mechanical factors that have been produced are of importance in the causation of the disease; that their importance probably is in their interfering with the digestive organs and in giving rise indirectly to toxæmic conditions. As to the after history, it is recognized that a certain number of these cases never

recover, that a chronic nephritis results from the disease occurring in a pregnant woman. That is a point, I think, that ought to be more carefully studied.

Dr. LUSK stated that in advocating rapid labor he did not mean to advocate *accouchement forcé*. He would attempt to dilate the cervix with his finger and empty the uterus in five to fifteen minutes.

Dr. MURRAY also stated that he did not believe in *accouchement forcé* in the sense that Dr. Grandin had indicated.

Dr. DAVIS (summoning up discussion). The line of reasoning which led up to this paper was based upon the writings of Bouchet. The line upon which Bouchet is working is the most suggestive yet employed. Other problems in the same line will be solved. As to the use of the word toxæmia it, like all language, conceals ignorance. The object of the paper is a practical one, that we shall recognize the disease, and not be silent with eclampsia on our hands. I think him the better obstetrician who avoids eclampsia than a man who successfully performs a difficult delivery in eclampsia. Furthermore, medical men are coming more to the opinion that all cases of nephritis must be studied not so much from the standpoint of the region of the kidney as from the symptoms of a general toxæmia. I do not go to the enthusiastic length of Dr. Grandin with the *accouchement forcé*, but when advocating that the uterus be emptied at once I mean that the patient shall be put sufficiently under the influence of chloroform for gradual dilatation to be accomplished by the finger, Barnes' dilator or the tampon, and that when such dilatation is accomplished the uterus be emptied by version or otherwise. Incisions in certain cases of contracted cervix will be found of advantage. Chloroform I believe to be the safer agent for subduing the patient's convulsions during the manipulation. I do not believe the urea causes the convulsion, but I simply use the urea as an index of excretory quantity—not as a poisonous material of itself. That eclampsia is caused by position of the foetal head has not been in accordance with my observation. In conclusion, I would make the familiar point that the foetal life must not be considered in dealing with a toxæmic woman, for the reason that the foetus stands in distinct danger of death.

A vote of thanks was tendered to Dr. Davis for his very excellent and interesting paper.

Adjourned.

THE STATUS OF GYNÆCOLOGY ABROAD.

BY HIRAM N. VINEBERG, M.D.

Double Carcinoma of the Uterus.

J. PFANNENSTIEL (*Centbl. für Gyn.*, 1893, No. 18) writes again on this subject and relates a case bearing out his theory of secondary inoculation by means of discharges and by contact brought about by the use of sounds and other instruments. The case was one of the "platten epithelial" variety affecting the cervix primarily, and in the fundus a secondary lesion was found, the size of a 25 cent piece of the same variety. The article gives a critical review of all the published cases, which thus far number only ten.

Sacral Total Extirpation of Carcinomatous Uteri.

GEORGE ABEL (*Centb. für Gyn.*, 1892, No. 19) describes the technique he followed in seven cases which varied slightly from Hochenegg and Herzfeld. He is in favor of the operation, and thinks if it were followed in every case of cancer of the uterus, the ultimate results might be better than they are at present. Before a case is subjected to operation, it ought to be examined under narcosis to determine the extent of the lesions and secondary infiltration.

Abdominal Myomotomy.

R. CHROBAK (*Centb. für Gyn.*, 1893, No. 20) tabulates thirty-nine cases of myomotomy, in which he did total extirpation and turned down the stump into the vagina, closing up the peritoneal cavity. He had only one death which occurred in the eighteen cases he operated after the so-called retroperitoneal method. The only criticism of the method which he will admit is its difficulty, and this, he thinks, is not a serious one as it can be overcome.

A Case of Inversion of the Uterus.

H. ABEGG (*Ibid*) reports the case and its successful treatment partially by manipulation and partially by the use of the colpeurynter. He considers it a good point (which he carried out in the case) of packing the vagina about the colpeurynter with iodoform-gauze. The woman had a rapid pulse and a heart murmur, which he considers as being in some way produced by the inversion.

Injuries of the Cervix in Labor.

FRAISSE (*Nouv. Arch. d' Obst. et de Gyne.* 1892, *Febr. et März* and *Centbl. für Gyn.* 1893, No. 21), distinguishes four degrees of laceration of the cervix during labor. Under the fourth degree he describes the rare cases in which the tear extends to the peritoneum and opens into the abdominal cavity. As a counterpoise of the treatment the author selects the third degree in which the tear extends to the parametrium. These injuries may occur when the head passes through an os insufficiently dilated, and the head is disproportionately large, or in malpositions or monstrosities. The most important symptom in deep cervical tears is hæmorrhage, which can usually be distinguished from hæmorrhage due to other causes. It occurs before that attending the separation of the placenta. Immediately following the birth of the child a stream of blood gushes out. This brings about a relaxation of the uterus, and the body in consequence doubles over the cervix preventing a further loss of blood for the time being. But as the uterine contractions occur to expel the placenta, the uterus straightens itself out again and the flow of blood occurs anew. The blood itself has an arterial character in contra-distinction to that coming from the placental site, and flows in spurts from the open blood vessels. The hæmorrhage may be confounded with that produced by atony of the uterus, partial adherent placenta, tears in the vagina or perineum, injuries of the vulva or clitoris. The best method of arresting it is that given by Breisky; with the one hand, the uterus is pressed forward, while two fingers of the other hand press the posterior lip up against the uterus. In this way the edges of the tear are brought together, and the pressure being kept up for five or ten minutes is usually sufficient to arrest the hæmorrhage.

Total Extirpation for Prolapsus.

This formed one of the subjects for discussion in the Berlin Gynæcological Society April 28, 1893 (*Centb. für Gyn.*, 1893, No. 21.) It was evoked by the presentation of a case by Czempin, who claimed a good result by sewing the vaginal flaps high up to the stumps of the broad ligaments.

VEIT remarks that he had recently seen a case of vaginal enterocele that had been published by some one else as an instance of cure after long observation of prolapsus uteri by total extirpation. The woman had more serious symptoms now than ever before.

DUVELIUS stated that he had also seen several cases of relapse.

MACKENRODT had also observed the same unsatisfactory results following total extirpation for prolapsus. He considers total extirpation justifiable only when the fundus is fixed very low down and then only in the case of elderly patients. In all other cases when the uterus can be brought forward, good results are obtained by anterior colporrhaphy and vaginal fixation.

Placenta Prævia.

RÜDER (*Muench. Med. Woch.*, 1893, No. 33) reports twelve cases coming under his care, three of which were placenta prævia centralis, four of placenta prævia lateræis and five of placenta prævia marginæis. In the hands of a skillful obstetrician it is always best to perform version which can be done when the os is dilated sufficiently to introduce two fingers. But the practitioner may safely follow the expectant plan by resorting to tamponing until the os is sufficiently dilated to employ version. He gives the preference to iodoform gauze over the colpeurynter for the following reasons:

- (1.) It is more easily rendered aseptic.
- (2.) It is more suitable that the colpeurynter in multipara with wide gaping vulvæ in whom chiefly the condition is met with.
- (3.) It does not offer the same difficulties in its application.

Nephritis in the Gravid and Puerperal States.

A. VOLKMAR (*Muench Med. Woch.* 1893, No. 34) gives a critical review of the work of other observers in this field. The author's observations lead him to the conclusion that pregnancy and labor may each bring about a nephritis which stand close in etiological relation to each other. The course which a gravid and puerperal nephritis runs is usually a favorable one. In the latter the albuminuria even with cylinders, disappears in twenty-four to forty-eight hours and a "restitutis ad integrum" occurs.

A Contribution to the Knowledge of Cervical Discharge in Chronic Endometritis.

S. WOLF (*Muench Med. Woch.*, 1893, Nos. 37 and 37) made bacteriological examinations of the secretions coming from the cervix in eight cases of chronic endometritis occurring in Winckel's Ambulatory service of the Frauenklinik. The discharge was obtained under the strictest antiseptic precaution and cultures made on agaragar, blood,

bouillon and potatoes. The author claims greater accuracy for his work over that of Winter's as greater care was observed in the details. He found micro-organisms in all excepting one case which had previously been treated by antiseptics. Different from Winter he found cocci mostly in all and the bacilli found by Winter he thinks was obtained from the vagina. The author observed only two forms while Winter has described several. Of the pathogeny of these cocci the author is not in a position to determine. Still he agrees with Winter that the cervical secretion contains at times staphylococcus pyogenes in diminished virulence. Gonococci he found only once with certainty but in four other cases the history pointed that they were the pathological factor of the endometritis. Gonococci on reaching the cervix soon die but they form a favorable soil for other cocci and it is in this way that they are especially noxious.

Transmission of Typhoid to the Fœtus.

JANISZEWSKI (*Muench. Med. Woch.*, 1893, No. 3) reports a case of this occurring in the Hygienic Institute of the Freiburg University. The woman was in the eighth month of pregnancy when she contracted typhoid fever. In the third week of the disease she gave birth to a male child which was immediately transported to the children's ward of the Frauenklinik. It died on the fifth day and the autopsy revealed an enlarged spleen. A bacteriological examination of several organs detected the typhoid bacilli in abundance.

Double Ovarian Sarcoma.

THEILHABER (*Muench. Med. Woch.*, 1893, No. 28,) reports a case of this rare condition. It occurred in a married woman twenty-five years of age who had had one child and a miscarriage later. The tumors were non-adherent and the pedicles were formed by the ovarian ligaments. The tubes were not involved and were not adherent to the ovarian growths. The patient had also a mediastinal sarcoma which was the immediate cause of death through a copious pleuritic exudation. The author could not say positively which was the secondary growth as he had not seen the patient for twelve months. At that time he had operated on her for a vesical fistula. The ovaries were then apparently normal.

A New Method of Treating Tubercular Peritonitis.

W. NOLEN (*Berl. Klin. Woch.*, 1893, No. 34) reasoning from the known good effects of cœliotomy in tubercular peritonitis, even when

the cavity is but little disturbed, concluded that the curative agent is the air coming into contact with the diseased peritoneum. Accordingly in March, 1892, he undertook the experiment of inflating air into the peritoneal cavity of a little girl eight years old, suffering with tubercular peritonitis. The fluid was first withdrawn and the air which is rendered sterile and warm by a special apparatus, is injected. After the second injection the child was cured and remained so when seen several months later. Two other cases were treated in the same way, one with a similar good result, the other was only improved, but the patient was in a very advanced stage of the disease and the intestines were involved.

[We are forced to make the criticism that the diagnosis of tubercular peritonitis on symptoms alone as insufficient. We are not told that the withdrawn fluid contained tubercular bacilli, no mention having been made of its having been examined to determine their presence or absence.]

The Treatment of Vaginal and Uterine Prolapsus.

KEHRER (*Berl. Klin. Woch.*, 1893, No. 37 and 38) discusses this subject at some length. He is a strong advocate of colporrhaphy and thinks more can be accomplished in this way than by any other method. He performs the operation frequently under cocaine anæsthesia, using a five per cent. solution, and of this one or two Pravaz' syringefuls. He is also a firm believer in the superiority of silver-wire suture over all other suture material, and advises that the sutures be left in situ for about three weeks. When possible it is best to do the anterior and posterior colporrhaphy at two different sittings, but when they are both done at the same time, then an absorbable suture (cat-gut) must be employed for the anterior wall. He is also in favor of denuding a small portion at a time and suturing it so as to lessen the loss of blood.

TRANSACTIONS OF THE OBSTETRICAL SOCIETY,
PHILADELPHIA, PA.

October 5, 1893.

Edited by TRUMBULL W. CLEVELAND, M. D.

Abstract of paper entitled

REMOVAL OF THE UTERUS AND ITS APPENDAGES
FOR PELVIC INFLAMMATORY DISEASE.

By J. M. BALDY, M. D., PHILADELPHIA.

This valuable paper opens with a brief summary of the differing results obtained from the removal of the uterine annexa and associated inflammatory products by *coeliotomy*. While a large number of women formerly doomed to hopeless invalidism have been restored to health and usefulness; in many instances this happy result has not been secured. This latter fact has been held up by the opponents of *salpingo-oöphorectomy* as conclusive proof that this method of procedure has failed and should therefore be condemned *in toto*. He calls attention to the large number of patients in the practice of all on whom abdominal section has been performed for pelvic inflammatory disease, who consult us for continued bleeding, leucorrhœal discharges—often profuse—and pain. Women who have submitted to the operator for the relief of these very symptoms and who still complain, months and even a year afterwards of the same amount of suffering. These cases come to us not only from our own practice, but that of our neighbor's; blaming the operator because of failure to obtain relief at his hands.

The author says, "As a matter of fact, a certain too large proportion of our patients still remain uncured by a simple removal of the uterine appendages; and let me emphasize the fact that I am now discussing a class of patients who have an easily demonstrable amount of disease of these organs—no reference is intended to that too numerous class on whom operations are performed for symptoms alone, no disease being found by a physical examination and none capable of clear demonstration even after the organs have been removed.

"Local applications to the uterus after a *coeliotomy* for removal of the appendages has been tried, with no greater success than the same amount of treatment before the surgical procedure. Curettement of the womb has been followed with little more encouraging results. I have adopted this course in some six or ten cases, and have not been

able in a single one to say that I had cured the woman. A number of women who have been unrelieved or only partially relieved in spite of the fact that a complete and clean removal of both appendages had been made, and that the remaining uteri were freely movable. No trouble could be detected in the pelvis by a most careful and repeated physical examination.

"After local and general treatment of these women, until we were both discouraged and disgusted, I, in despair, suggested that the womb itself be removed. I was led to this decision from the fact that I had known some months before of a case on whom my colleague, Dr. Baer, had performed several abdominal sections in, I think, a neurotic case, without obtaining much relief, and upon whom he had finally performed hysterectomy with an extremely satisfactory result. This, in addition to the work being done in France in the way of hysterectomy for pelvic abscesses, evidently influenced my thoughts in this direction. The woman to whom I proposed the operation had had her original operation for suppurating uterine appendages. Months after her operation she still had a large uterus, irregular bleeding, profuse leucorrhœal discharges, great backache and pelvic bearing-down pains. The uterus was removed by supra-vaginal amputation low down into the cervix, and dropping the stump back into the pelvis. Her recovery was an uninterrupted one. The bleeding and leucorrhœal discharges ceased at once, and the pelvic pains and backache almost entirely disappeared, the little that remained of them being evidently due to the menopause. Encouraged by this result, I have continued this line of treatment up to the present time and have now had sufficient experience to feel warranted in recommending the procedure to your careful consideration and trial. In two cases have I removed the uterus subsequent to a simple removal of the appendages. Six times have I removed it at the primary operation.

"It is well known that in pelvic inflammation the disease first affects the womb, and secondarily invades the Fallopian tubes and the pelvic peritoneum. Not only is the endometrium affected, but the inflammatory products invade the deeper structures which go to make up the uterine walls. If a suppurative process follows, these infiltrates undergo the same changes as do the same elements in the walls of the Fallopian tubes. The ease with which a ligature cuts through uterine tissue, when applied at the cornua in cases of pus tubes, is a well-known demonstration of the truth of this. With a Fallopian tube and uterus,

both of which are diseased by the same factor and to the same extent, is it rational to suppose that a cure is to be always obtained by the removal of the tube alone? Is it not common sense to remove the whole of the disease, and not only a part? Theory and practice both combine in this matter to force the conclusion.

"It must not be understood that I recommend the removal of the uterus together with the Fallopian tubes and ovaries in all cases of pelvic inflammatory disease. In many cases the uterus has succeeded in throwing off the original infection, and is comparatively healthy. Under such circumstances the procedure is not indicated. But where an abdominal section is performed for the removal of the uterine appendages, and the womb is found enlarged and diseased, especially if it has been surrounded by extensive adhesions, and the freeing of it leaves large areas of denuded peritoneum, hysterectomy should be the operation of choice. But a single objection can be raised to this proposition, viz., the mortality of the operation. Can, then, hysterectomy be performed as safely as ovariectomy? Unhesitatingly I answer in the affirmative. My own hysterectomies now number more than eighty, with seven deaths. These deaths include the accidents incident to acquiring the skill and perfecting the technique; in a similar series the results will be infinitely better.

"Beyond the question of mortality there can be no doubt as to the advisability of removing the diseased uterus. With its appendages gone it is an altogether useless organ, and even the old familiar cry of mutilation and unsexing the patient has no place."

He admits that since adopting this method of practice the field for hysterectomy has greatly widened, and quotes a case where he assisted in the removal of a uterus in a woman on whom seven abdominal sections had been performed without relief. The uterus was enlarged containing several small fibroids, some of which were calcareous. Patient permanently relieved. Also cites a recent case of his own of cœliotomy for double ovarian cysts, one cyst having "grown into the broad ligament," the other being free. Uterus much enlarged. Operation finished by removal of both tumors, Fallopian tubes and uterus. Patient convalescent. Uterus exhibited.

In conclusion, Dr. Baldy says: "Looking at this matter as I do, it has been no great surprise to me to find others adopting this procedure. Dr. Krug of New York has arrived at the same conclusion, and Dr. Henrotin of Chicago is working on the same lines. I have no doubt that after a winter's agitation of the subject, most of the profession will be won over to similar thinking and practice."

DISCUSSION.

Dr. CHARLES P. NOBLE. I have seen the uterus removed in such cases, although I have not done so myself. As Dr. Baldy has suggested, the question is to be decided on its merits. If the mortality attending removal of the uterus and appendages is not greater than that of removal of the appendages alone, and it can be shown that there are any advantages in removing the uterus at the same time that the appendages are removed, the operation will be adopted. From my own experience, however, I think that the operation will seldom be necessary.

The cases to which Dr. Baldy has referred and in which he states that the appendages were cleanly removed, bear directly against the argument that I intend to make, and that is that in the majority of cases where women continue to complain of pelvic conditions after removal of the appendages, it is because the operation was not thoroughly done. In my own hands the few cases that have complained of pelvic trouble after operation were among my earlier cases, where the operation was incomplete. In some few cases the operation was not completed owing to the bad condition of the patient, so that I felt it wise to get through the operation with the least possible expenditure of time. Where the appendages are cleanly removed, I feel that, almost without exception, the uterus will undergo involution and contract below the size of the normal uterus when the appendages are present. The exceptions are very rare. At the same time I believe that there are cases where a very large uterus, infiltrated from chronic metritis, will continue to produce symptoms, and the question comes up whether, granting that it is true that we occasionally have such cases it is better to adopt any general rule to remove these uteri, the majority of which will give no trouble, or to recognize that the operation is necessary only rarely, and do the operation that we are accustomed to do and later remove the uterus if it causes any trouble. At the present time I feel inclined to adopt the latter procedure, for, in my own hands, to leave the uterus has almost never given rise to any trouble.

I do not believe that experience will show that we can take out the uterus with the appendages with the same safety as we remove the appendages, for it will take at least some fifteen minutes longer to complete the operation. To remove the uterus will itself not take so long, but to stitch the peritoneum over the stump will require at least ten minutes. For that reason alone, unless the experience of those

who advocate this operation convinces us that they can operate with great safety, it seems to me that it will be wiser to remove the uterus subsequent to the primary operation if it gives rise to mischief, which, I believe, will be seldom.

Dr. G. BETTON MASSEY. I am glad to learn that Dr. Baldy has discovered that the uterus is a pelvic organ and is involved in pelvic inflammatory trouble. I think that it is a natural sequence of his previous position in regard to taking out so many moderately diseased tubes and ovaries, that he should now want to take out the uterus. As I have contended all along, this disease is a catarrhal disease, as a rule, and involves the mucous tract from the mouth of the womb up ; and in all cases the original seat of the disease, and often the principal seat, is the uterus, but only the appendages are removed. It seems to me, now that Dr. Baldy advises removal of the uterus, he has gotten to the end of his tether. What will he do if this fails? It almost looks like an illustration of the ancient saying, "Whom the gods destroy, they first make mad."

There are other methods of cure than removal of the uterus. I think that Dr. Baldy will remember a case which he saw in 1888 at Dr. Bradford's clinic at the Pennsylvania Hospital: A Russian woman, with a deep laceration on the left side of the neck of the womb, extending up to the body, and with decided salpingitis, or a condition resembling salpingitis, on the left. There was extreme tenderness, and every insertion of the sound caused great pain; pressure over the ovarian region elicited tenderness, and the woman was in great pain all the time. This woman was under my care for a couple of weeks only, and then for some reason went to another clinic. I learned afterward that Dr. Baldy had repaired the cervix. Nothing more was heard of the case until two years ago, when she turned up at my clinic at Spruce Street. She stated that she had been much worse since the operation for the repair of the cervix. She was given another intra-uterine treatment, and was again thrown into a painful condition, but as the result of the use of vaginal applications extending over a period of one year and a half, and later of intra-uterine galvanic applications when they became bearable, she is now well, and at her last appearance, some two or three weeks ago, she was five months pregnant and a perfectly healthy-looking woman.

I am glad to place myself on record as objecting to this operation at once as both barbarous and unnecessary, though the cause given for the procedure is a recognition of my own views of the importance

of metritis as the principal lesion in pelvic disease, as enunciated more than a year and a half ago.

Dr. JOSEPH PRICE: We all have, at least, some knowledge of the results due to a variety of gynæcological tinkering and all of which have some direct bearing upon this subject of post-operative trouble. As the operation, removal of the remaining uterus, is largely offered for the relief of these sufferers it is worthy of serious consideration. One could easily write a huge book on the subject if he reported all of his cases. Some of you, perhaps, examined a patient to-day, that I examined yesterday and others will examine to-morrow. The treatment commenced with dilatation of the cervix. This was followed by angry tubal and ovarian disease with fixation and also fixation of the uterus on the left side. An abscess followed, the precise character of which I am not prepared to state. Free incisions were made, one extending through the sphincter followed by packing so that it would close from the bottom up. The woman now has distressing incontinence of gas and fæces. I insist that in this case the removal of the diseased appendages clean and thorough will not absolutely cure this woman. In the womb shown to-night, the removal of the appendages followed by metrostaxis would put this womb at the size of a seckel pear in four days. The endometritis in the cavity of that womb can be wiped away with a little cotton. In a series of 200 hysterectomies many of you have seen me wipe away so-called unhealthy endometritis with a piece of gauze. These cases demonstrate that the prominence placed upon an unhealthy condition of the cavity of the uterus has been overdrawn, that the endometritis is fancied not real.

In regard to mortality. We all know that many of these patients suffer from post-operative sequelæ and that many of the operations were imperfect and incomplete, notwithstanding they are recorded as complete. For instance, I have a patient in bed now, and I have a trying piece of surgery to do on her on Saturday. Urine and fæces escape from a fistula. It is impossible to get a history or a correct statement, or any sort of a statement from her surgeon, one of the most prominent and best in this country. Her physician and herself have failed entirely to receive a statement as to what he removed. I know that one side or other or both remain with this fistula. This is a trying piece of work to finish. In one of the most prominent hospitals in this country, a few days ago, a man opened the abdomen from the ensiform cartilage to the pubis, shook his head and closed the incision. I rejoice to say that I am guilty of abandoning only one fibroid. I did

that because the woman took chloroform badly and the kidneys were bad. She also needed preparatory treatment. Had she been near me and under my personal care, I should have removed the tumor in spite of these things.

Keith insisted on a mortality of 5 per cent. after hysterectomy. I agree with him. While I lost six of my first hundred cases, five of these could be dismissed, three or four were cancerous and hopeless, the fourth died of pyæmia, and the sixth died of pyæmia with a huge gangrenous tumor. The pyæmia antedating the operation.

Tait recommended the removal of the uterus in angry pus cases. It is well in discussing this subject to consider the condition of the pelvic organs and uterus. I have many times repeated the section for adhesions, or ventral fixation with suffering, and in a good number of such cases where the removal of the appendages was thorough and complete, I find a little uterus, a perfectly innocent little organ. I find fixation of the omentum or small bowel or some lesion of that character justifying the second section or a third section, and let me assure you that in these repeated operations you will have uphill work to relieve and cure the patient. It is exceedingly difficult to prevent recurrence of the lesions. Only a short time ago I operated on a woman from whom one of the best surgeons of this city removed the left tube and ovary and the right tube. He records it as a complete operation, although he left the right ovary. I found attached to the pedicle on the right side a link of ileum with an hour-glass contraction and generally adherent omentum. First, I released the omentum; second, the bowel; and third, removed the right ovary. In this case removal of the uterus would have been folly. I found it healthy and if some one had attempted vaginal removal of the uterus, he would not have relieved the patient. The adherent ovary would remain, and in all probability the fixed bowel and ovary would have remained sources of suffering and bowel obstruction would probably follow as it did in two of Coe's cases. The co-existence of tubal and ovarian disease with extensive adhesions is a strong argument against the vaginal method. The frequent complication of tubal and ovarian disease is the one argument in favor of the removal of the uterus for cancer from above. I must say that I am uncertain as to just which operation I will adopt. In the absence of tubal and ovarian disease, vaginal hysterectomy for malignancy is an easy operation, and about all the patients should get well. I completed fifty-three operations with one death. Since then I have lost two.

In regard to the neurotic cases. Many of these women suffer from hospitalism. If you have run a hospital you have a dread of the hospital patient. One who has been in a hospital once, is hard to manage. If she has been in two hospitals, she is very difficult to manage, and if in three or four do not touch her at all. Hospitalism is hard to contend with.

I might allude to two or three cases bearing upon this subject. Some years ago I removed the diseased appendages from the wife of an engineer. I left a portion of the ovary adhering to the sacrum. It was as difficult to tear off as to remove the paper from the wall. At this point a cyst formed. The woman continued to bleed irregularly in spite of most careful curetting twice. The uterus was small. I subsequently removed the uterus with partial relief to the woman. In the severe forms of ovarian disease there is this risk of leaving a portion of the ovary adherent to the viscera or to the pelvic bones and in these pus cases there is the strongest tendency to mischief. I venture to say that in my own cases mischief occurs in 6 to 10 per cent. of the sections, but in ordinary ovariectomy it does not occur in 2 per cent.

Another case is that of a lady from New York, who in three winters spent the value of a Madison Avenue house in three private hospitals. Her treatment commenced with intra-uterine treatment, then with vaginal incision of an abscess on the left side and drainage, and repeated. Four years afterward, with three rubber tubes hanging out of the vagina, I removed the appendages and she made a beautiful recovery. The uterus was in the hollow of the sacrum and fixed. I released it and brought it to the abdominal wall. Eight weeks later, while standing dressing her hair, she felt something give way, and on examination I again found the uterus in the hollow of the sacrum. She then suffered continually for two years when I removed the uterus. She made a satisfactory recovery, but is not a cured woman. Why we should expect so much from some of these patients I am not prepared to say. I am surprised that more of these women with prolonged suppurative disease and great emaciation, to which are added the nervous phenomena of a precipitated menopause, do not go to the insane hospital.

In regard to these so-called post-operative sequelæ, it may be well to remember that some of them may antedate the operation.

In neglected and badly managed cases it is surprising that they recover speedily, gain flesh and strength rapidly. Too much prominence has been placed upon pelvic pain or discomfort, and the phe-

nomena incident to a premature menopause-bleeding or dodging is common in a normal menopause-pelvic pain. Backache, mental disturbance are all common and distressing at this time.

In but few cases operated upon is the uterus responsible for the unsatisfactory result; the mischief resides at other points.

Dr. M. PRICE: There is no question in my mind as to the impropriety of the operation advocated by the author of the paper. I could not conscientiously say before a court of justice that a man who deliberately took out the uterus for bad pus tubes or ovarian cyst, as in the case shown, was guilty of doing his duty. I would plead with him not to ask me to testify. It seems absurd to remove the uterus for intra-uterine trouble where the disease is within reach of any application, and within the reach of any operator that can cure anything from without, and thus increase the risk tenfold. I cannot for a single moment understand why we should do this. I have seen hundreds of these cases of pelvic disease and have done over two hundred operations myself, but never yet, in that whole list of cases, have I had to remove the uterus or been annoyed by symptoms that have followed the removal of the tubal and ovarian disease. I have seen a few patients who have complained of pain in the back, but have no doubt they would have complained no matter what procedure had been adopted. In these cases the pelvic viscera, bowel, omentum and mesentery were all in such a fused condition that there could be no question as to what would be the result. You cannot expect to cure such cases, and these are the very cases in which these gentlemen do not remove the uterus. They are glad enough to get out and leave the uterus. Why should we remove the uterus for the cure of these things that are within easy reach? Why should we remove the eye for the cure of granular lids, or the sinuses of the nose for the cure of catarrh? This would cure the disease. The inside of the uterus is within easy reach, although I have not had to treat it in the way to which Dr. Massey alludes.

The gentleman admits that he has had seven deaths in eighty cases. I venture to say, from the description of his cases, that more than half of the operations have been for uteri not as big as my fist. I have never yet, in all my gynæcological experience, seen a uterus removed for a tumor that was of less size than my head, except in malignant cases, and pelvic bound. We have no right to take out the uterus for pain in the back. We have no right to go into the pelvis for nervous symptoms simply because the woman has a uterus in her body. With

out good and sufficient reason we have no right to meddle with it no matter if there is disease of the appendages. Remove the diseased appendages. If this operation is going to add one single death to the list of one hundred ovariectomies, it is guilty of murder.

Dr. W. EASTERLY ASHTON. There is, unfortunately, among some surgeons either a tendency to run in a given groove, or to go from one extreme to the other. I am personally opposed to the removal of the uterus as a routine procedure for the relief of inflammatory disease. On the other hand, however, there are cases in which the muscular structure of the organ is the seat of the disease where I would strongly advise hysterectomy. I refer to septic conditions following labor or miscarriage, and also to those cases of pyosalpinx where the uterine walls have become involved.

The leucorrhœa which continues in some cases after the removal of the uterine appendages is due to an inflammation of the mucous membrane, the result of germ infection. As a rule this discharge gradually ceases as the uterus becomes more and more atrophied. If, however, the hypersecretion continues, curettement of the interior of the uterus will, if properly performed, cure the disease. It is obviously not necessary, therefore, to resort to hysterectomy in these cases.

I am glad to learn from the remarks of Dr. Price this evening that he has changed his views as to the value of curettement in cases of endometritis, and that he does not hesitate to employ the curette in the treatment of these cases.

In conclusion, I desire to state that unless there be an absolute indication of disease in the muscular walls of the uterus, it is bad surgery to remove the organ; on the other hand, however, if there be present an endometritis, we should wait a sufficient length of time for the atrophy of the uterus, which follows the removal of the appendages, to cure the disease. Should this not take place, the cavity of the uterus may be curetted.

Dr. CHARLES P. NOBLE: I wish to add a word to what I have already said. I believe, as I have already stated, that the number of cases which will give rise to the trouble is small, yet we know that occasionally we have metrostaxis after operation, and the uterus remains large, but in these cases, if the vigorous use of the curette does not arrest the hæmorrhage and cause the uterus to undergo involution, I believe the ligation of the uterine arteries on each side will do as much good as taking out the uterus. I have tied the uterine arteries in conditions somewhat similar. I recently proposed to do a hysterectomy,

but the patient's condition became so bad that I thought it would be bad surgery to complete the operation. I removed the appendages, but I felt quite certain that she would bleed subsequently, for the endometrium was extensively diseased. Some two weeks later I cut off the lower portion of the uterus and tied the uterine arteries on each side. I have done the same thing in hyperplastic uteri where I have operated for prolapse. I believe that in this way we can bring about involution without resorting to removal of the uterus.

Dr. M. PRICE. As Dr. J. Price has left the room, I should like to correct a statement made by one of the speakers. It was said that Dr. Price had asserted that he never used the curette. This is not correct. He has said that he never used the curette for the delivery of the placenta, always using his index finger for that purpose. He never said that he did not use the curette under any circumstances.

Dr. G. BETTON MASSEY. I may remark that most likely these cases that Dr. Baldy tells us about as being already cured are like a case he reported last spring, where he took out a small fibroid, about the size of a seckel pear, after the patient had received electrical treatment. That case was seen recently by me, and is suffering very much. She has no ovaries, she now has no uterus, so he will have to devise something else for her.

I remember well the case that Dr. Price mentioned, where a lady had suffered much for two years after removal of the appendages, and came to him for removal of the uterus. She was sent to me and remained two weeks, but I did not get along very well with her. That case had a most offensive discharge from the uterus, and in addition to this a continuance of menstruation. These were the only things that she complained of. He tells us now that subsequent removal of the uterus failed to cure the case. It is possible that nothing would have relieved her, on account of the unfortunate mental condition, yet I think that the physical conditions could have been cured by persistent treatment of the uterus, but it would have taken more than two weeks. The peculiarly offensive discharge from the uterus made me suspect a sinus leading through the tubal opening to the seat of an infected ligature.

Dr. HARRIS A. SLOCUM. I am thoroughly in accord with what Dr. Baldy has said. He has chosen his language carefully, and I understand him to say that when the appendages have got to be removed, and when there is any indication of disease of the uterus, it is better to also remove the uterus. To remove the uterus after the ovaries are

gone does not further lessen the female attributes of the woman. My views on this point are fully given in the *Medical News* of October 7. I maintain that if the ovaries are already gone the uterus is an entirely useless organ. It may threaten the organism through the reflexes. It may, also, on account of the channel running from the cavity to the tube, threaten the endometrium with subsequent inflammation. That is a point that the curette will not reach. Where do we have the most lasting inflammation in a tract? It is at the point of stricture. The part of the tube nearest the uterus is the narrowest, and the part penetrating the uterus is exceedingly narrow. As Dr. Baldy has mentioned, we often notice the ease with which a ligature will cut through the uterus. That is an indication that inflammation still exists. It exists not only in the parenchyma, but also in the endometrium, and that remains even after the tube has been entirely removed and the so-called diseased portion has been taken away, but a certain amount of disease remains, that is, the portion from the pedicle to the body of the uterus, and remains as a point of perpetual departure for subsequent attacks of endometritis.

What use the uterus can be in such cases is hard to say, and I see no objection to its removal if the mortality is not increased. I think that the latest method of operating by ligating the uterine and ovarian arteries by Baer's method, so far as I have seen it, is the ideal operation, and the mortality should be small. The fear of infection should be less, because, as a rule, the infecting portion is above the incision. After removal of the appendages alone there is more danger of septicæmia. After removal of the uterus there is little danger of pus coming in contact with the peritoneum.

When the ovaries are absolutely condemned there is no physiological reason why the uterus should not also go. On account of the inferior branch of the hypogastric plexus, we have reflexes which are not checked, but probably made worse, by the change in circulation, and from the fact that the uterus has nothing to do physiologically, and never will have.

Dr. J. M. BALDY. The colored girl to whom Dr. Massey refers had a fibroid tumor as large as one's head. She was suffering in bed four months after the electrical treatment. I then removed the tumor. I consider that I should have done less than my duty had I not removed it, and if she is still suffering it is unfortunate, as she is doing so in all probability on account of the bad advice she received not to

have it removed, until she was in such a condition that her recovery is tedious and long drawn out.

As far as the other case is concerned, that of the Russian woman, the repair of the cervix was done by another gentleman. I assented to and assisted at the operation. She has complained ever since. She has been in my hands a dozen times within the last six months. She will complain as much after the baby is born as she does now. She is one of the chronic hospital grunts and growlers we all see, and the mere fact that she had a torn cervix repaired signifies nothing as to her present complaints, excepting that the operation did her no good. It certainly did her no harm. Electricity seems to have failed as well as surgery in this case.

In regard to incomplete removal being the explanation of most of these cases of post-operative sequelæ, I do not believe that is the fact. Most of these cases of post operative sequelæ have come to me from the hands of the Drs. Price, and I am confident that they remove the appendages completely. I have seen the same thing after my own operations where I know that I have removed them completely.

I realized when I brought this subject forward that I should be criticised, but I am prepared to stand by what I said, and I predict that before long some of you will come around to this view. There has not been a single valid argument against removal of the uterus advanced in the discussion. It has been stated that it is unjustifiable and that it is murder, but no one has offered a single valid argument against it. Such talk is sentiment and assertion, but not argument or reason. The appendages are gone. The change of life has come on. What good is the uterus? It is no good to the woman or anybody else. Can it be dangerous, or is it ever dangerous? In my paper I emphasized the fact that I was speaking of pus cases where the uterine walls were infiltrated, and not of a small amount of disease such as some have spoken of. I spoke of those cases where a ligature will cut through the uterine cornua and where there is even pus in the walls of the uterus, although, perhaps, microscopical. Now if the tube wall is infiltrated with pus and worthy of being removed, why is not the uterine wall infiltrated with pus worthy of being removed? Can the curette reach the uterine wall? The gentlemen who have most strongly spoken against this treatment have taken the ground that the uterus after operation should be treated by intra-uterine applications and by the curette, yet these are the gentlemen who have constantly condemned the use of the curette and intra-uterine treatment, and

now, sir, they have the assurance to come here and say that they would not do anything to relieve the symptoms arising from this organ but use this treatment which they have condemned, and whose statements are on record against them in these very transactions. What do you presume, Mr. Chairman, is the animus of such criticism, and what, sir, is it worth? Curettement and intra-uterine treatment will not reach disease in the uterine walls. If it will do that it will reach it in the Fallopian tubes. If it is murder to remove the uterus, it is murder to remove the Fallopian tubes; the disease in the two organs is the same and arises from the same source.

The very first patient on whom I performed this operation of hysterectomy for post-operative sequela, I treated for months after the operation by intra-uterine measures, and then took her into the hospital and thoroughly curetted the uterus, and packed it with gauze, without any result. That was a patient of the Drs. Price, in spite of the statement by them that all of their patients get well. That woman went around for months not cured, and complaining bitterly. She was cured by the removal of the uterus. The statement that such uteri as the one before you will in four days become as small as a seckel pear is an exaggeration with which we are all becoming rapidly familiar. It is absolutely not a fact. It is not a scientific fact that any uterus so large and diseased will after removal of the appendages become as small as a seckel pear even in four months, and sometimes not in four years. It *is* true that after removal of the appendages many of these uteri do atrophy in a short time, as after the menopause, but these are clearly not uteri infiltrated with pus. They constitute the class, to which I referred, to which this operation is not applicable, where the uterus has prior to the operation thrown off the septic disease and is already fairly healthy. If a patient has gone two or three years with pus tubes, and the uterine wall infiltrated with pus, I do not believe that it is even in the range of possibility for removal of the appendages to bring it down to the size of a seckel pear in a period measured by days. Many are never brought down to a condition of health. Many patients are now running around the city with uteri half as large as normal, and remaining so a year after an operation, and some of these will have to have their uteri removed if they hope to regain their health.

I do not claim that this cures all cases, and I have no doubt that by removing the uterus with the appendages we shall remove some uteri which would become healthy if let alone. That I grant. That

I know will be so. But is there any harm done by the removal of the uterus? That is answered entirely by the mortality. Can the uterus be removed as safely as the appendages? Therein lies the gist of the whole question. What is the comparative mortality. There is no earthly argument in favor of retaining the uterus. It may become a positive trouble, and in many cases it does so. Continued and profuse bleedings, profuse leucorrhœal discharges, and backache and pains are not rare conditions under these circumstances. It may undergo cancerous degeneration, even if that is a far-fetched supposition. There are many ways in which it may give trouble, and there is no reason why it should remain. If it can be removed safely I see no reason for leaving it in the class of cases to which I have referred.

In regard to the mortality after hysterectomy, the fact that three deaths occurred after the vaginal and only *four* after the *supra-vaginal* operation, all four cases being tumors larger than the head, will answer the criticisms offered on that score. Undoubtedly, by a skillful surgeon, the uterus can be removed as safely as the appendages alone.

As to the case from New York with drainage tubes projecting from the vagina, that referred to by Dr. Price, that patient was unrelieved by removal of the appendages, and the operator subsequently removed the uterus. This is in the direct line of reasoning that I have followed, although he now condemns the same procedure in my hands. Consistency, thou art a jewel! It is true that patient was not cured, but he did not state that the patient was not relieved. How could you expect a woman who had undergone what that one had for years to be cured by any operation in a few months? This is not in reason. This is a great mistake that we have made in the past of expecting too much, and promising too much, from an operation. Some of these patients are broken down in health and racked by pain, and their nervous system is in such a condition that they never will be absolutely cured, only relatively cured. I claim, however, that they will get more relief from removal of the uterus with the appendages than if we remove simply the appendages.

Dr. Massey asks what will I do when this fails? When I find this as worthless as I have found electricity I will throw it aside as I did electricity, and hunt for something else.

Abstract of paper entitled

EXPLORATORY CÆLIOTOMY FOR ASCITES ABDOMINALIS.

BY FRANK W. TALLEY, M. D., PHILADELPHIA.

Two cases reported.

First Case. Virgin, age 37. For nine months past has suffered from pain in lower part of abdomen and gradual distention of abdomen. Confined to bed for past three months. On examination abdomen greatly distended, cedema of feet, ankles and vulva. General health poor. Small exploratory incision made and fluid evacuated. Both ovaries, broad ligaments and pelvic tissue found to be carcinomatous, a few nodules in omentum. Wound closed. Patient succumbed to the course of the disease.

Second Case. Woman, age 50. Semi-conscious. No history. Belly enormously distended, cedema of legs. Abdomen opened. Walls greatly thickened and fluid evacuated. Pelvic cavity explored and found healthy. Fluid continued to flow from connective tissue of abdominal wall. Wound left open for drainage, dressed with tight layer of gauze and binder. Patient made good recovery.

Dr. TALLEY wished an expression of opinion as to choice of procedure in cases of ascites in the female where heart and kidneys were healthy. Whether paracentesis abdominalis, or cœliotomy should be performed.

Relative dangers. With trocar. Puncture of an adherent intestine, or vessel in adherent omentum. Septic matter introduced by trocar.

With cœliotomy the only danger is septic infection, which is slight.

Relative advantages. Tapping simply evacuates the fluid and thus aids bi-manual examination. Fluid will return.

With cœliotomy the introduction of the finger clears up diagnosis.

Associated conditions of ascites in the female are ovarian carcinoma, tubercular peritonitis and ovarian papilloma. In ascites due to carcinoma of ovary, the extent of infiltration and question of removal can only be determined by cœliotomy.

In tubercular peritonitis the diagnosis can only be made positively by cœliotomy and complete recovery may follow its performance.

Ovarian papilloma is not easily diagnosed by palpation after tapping, and the fluid returns.

Benign tumors, though recognized on palpation by size, their nature and amenability to operative interference remains unknown.

DISCUSSION.

Dr. M. PRICE. I will call attention to one or two cases illustrating the value of procedure which the doctor recommends. I hardly think that I should say that this was exploratory simply because it ends that way. In the report of his cases he has indicated what his object was. In tuberculosis and in cancer I think that we can usually diagnose the condition before operation, but the operation is required because it is the only safe method of evacuating the fluid. It is absolutely safe. I have done the operation a number of times in tuberculosis and cancer where the relief was very marked. In fact, a drainage tube left for a day or two forms a perfect tract which will afford drainage for weeks and months. In a case operated on a few months ago, I opened the woman for supposed ovarian disease. There were large masses on either side. I did not suspect tuberculosis, as she had been confined three months before, and it was supposed that the trouble started from septic complication at that time. I found the whole peritoneum studded with tubercle and the ovaries apparently a mass of tubercle. The uterine wall was covered with shot-like bodies. The fluid was evacuated and the whole peritoneum dusted with a drachm or a drachm-and-a-half of iodoform. The woman is now about, but I do not suppose that she will be cured. Dr. Flick believes that if exploratory section is repeated and iodoform thoroughly used, a cure will be effected in these cases provided there is no tubercular involvement of other organs beyond our reach.

In another case which has been reported to this Society the patient had been in bed eight months and was carried to this city on a litter. She was opened for diagnostic purposes and for the removal of the disease if possible. Tuberculosis was not suspected. In that case we removed large tubercular, cheesy lumps from the mesentery. Some as large as a small walnut. Ten or fifteen were removed and the smaller ones were dusted with iodoform. That girl, after four weeks, was able to leave the hospital, and spent the summer visiting her friends. The tubercular trouble, however, reappeared subsequently. Whether or not she took cold causing the tubercular trouble to develop in other parts of her body, I do not know. In this case Dr. Flick advised repeated sections as the first one had done so much good.

Dr. G. BETTON MASSEY. This subject is very much like one which we discussed last winter as to how frequently the surgeon is justified in taking the risks of abdominal section merely for diagnostic purposes.

I think that the conclusion to be drawn depends somewhat upon the results. I did not quite catch what was the result in the second case.

Dr. TALLEY. The second case made a good recovery. The first case died in the course of two weeks.

Dr. MASSEY. It is clearly evident that some of these patients die from the exploratory section. The statement has been made that simple tapping or aspiration is unsafe, mainly because of the danger of sepsis, and that the only safe way of treating these hopeless cases is by section. I do not see why a man who would use a clean knife should use a dirty tube. He can obtain asepsis in puncture as well as in section. I think that where you can make a reasonably sure diagnosis, repeated aspirations have a decided value in prolonging life and adding to the comfort of the patient.

Dr. CHARLES P. NOBLE. I wish to say a few words on this subject. In general I agree with the position of Dr. Talley, that the fluid can be more safely evacuated by section. At the same time, I do not know that I would advocate section in all such cases. I think that where the diagnosis is perfectly clear that the case is malignant, it is useless to put the patient to the annoyance of going through a section. There are always several ways of looking at a thing. If the patient is poor, it involves her going to a hospital. If well to do, it involves considerable expense. In all cases it involves the distress of submitting to operation. Hence, in hopeless cases, it seems uncalled for. It seems to me that for what is gained by the section it is hardly worth while to do it under these circumstances.

In cases where the diagnosis is not clear (and there are many cases where it is difficult to say whether or not the patient can be cured without opening the abdomen) there is no question as to the advisability of doing one exploration. If the case can not be cured we may subsequently resort to tapping, I should not resort to repeated section in hopeless cases, because of the greater expense and the necessity in poor cases of removal to the hospital. If the patient is going to die in a short time she had better remain at home with her family.

Dr. W. EASTERLY ASHTON. In my judgment I do not know of any condition that would justify tapping, for the simple reason that when we tap we are in absolute ignorance of the position and fixation of the abdominal contents. It is no argument to say that we should tap when we desire simply to get rid of fluid, because it is less trouble than making an incision. If we simply desire to draw off fluid from the abdominal cavity, it is not even necessary to remove the patient from

the bed. We cut through the different layers of tissue in the belly wall, and pick up the peritoneum with catch forceps and divide it; you are then absolutely certain not to injure any of the intra-peritoneal organs.

Dr. Noble has said that if we have once performed an exploratory incision, and find that the disease is hopeless, tapping should be subsequently resorted to if the abdomen refills. It is in this class of cases especially that tapping would be most dangerous, as there is greater danger of intestinal fixation. I repeat again that I do not believe there is a condition in which it is good surgery to plunge a trocar into the abdomen of a man or woman.

Dr. J. M. BALDY. Dr. Ashton has taken to a great extent out of my mouth what I intended to say. We may make a positive diagnosis of cancer; that we can do in certain cases, but can we say positively whether or not it can be removed? There may be cancer of the intestines with a good chance of resection. There may be cancer of the appendages with a good chance of removal. The presence of cancer is not always a contra-indication.

Is there any truth in the statement that there is more trouble, risk and expense to the patient, in making an exploratory section than in tapping? In one case you must have a knife, needle, needle-holder and thread; in the other case you must have the aspirator and needles. I submit the question, which is the most trouble? The aspirator gives more trouble, and gives rise to more bad feelings in a man's mind than any other instrument, except the Paquelin cautery. As regards trouble, the patient need not be moved to make the incision. It is not necessary to take her into a private hospital and charge big fees. It is infinitely safer than the trocar, as I have reason to know. An incision of half to one inch is a simple, easy thing, with the patient in bed, and without giving much discomfort. The finger can then be introduced and you can determine whether you can do anything else or not, and you do not run the risk of puncturing the intestine. If it is necessary to repeat the operation, you should drain permanently.

With Dr. Ashton I cannot conceive of a single condition justifying tapping, without it be the presence of an ovarian cyst complicating labor. There the operator might tap the cyst, and immediately after the delivery of the child proceed to its removal.

Dr. CHARLES P. NOBLE. I took the position that it was wise to make a preliminary section, but I still hold that in hopeless cases it is useless to put the woman to the annoyance of repeated sections. If

you have a sterile trocar, all that is necessary is to scrub the abdomen, which you can do yourself. I would ask whether any of the gentlemen would be ready to do repeated sections under such circumstances without any nurse; or whether they would continue to subject the woman to the expense and trouble of a nurse; and whether they would do this without the remuneration we usually expect from a section?

My experience with tapping in about fifty cases has been that no accident has happened. While it is possible that a vessel may be wounded, as a matter of practice it rarely happens. I still maintain that aside from a preliminary section, it is unnecessary to subject a hopelessly ill patient to repeated operations.

Abstract of paper entitled

HYDATIDIFORM MOLE OF UTERUS.

BY HORACE FOX, M. D., PHILADELPHIA.

Specimen of Mole presented at a previous meeting.

Previous history of patient: Mrs. W., age 28, Russian; occupation housework; given birth to four children, naturally at full term; last child 1887; menstruated regularly since that date to time of this, her last impregnation; (period of gestation not given); never miscarried; no evidence of uterine disease, organic lesion, or blood dyscrasia. Parental history good. Patient considered pregnant, free from all bleeding or unusual symptoms up to twenty-four hours before expulsion of the mole, when she had a slight hæmorrhage and bearing down pains. These ceased in two hours, to return eight hours later, hæmorrhage profuse and pains strong; said to have "passed clots." A physician called in emergency, gave a hypodermic injection, nature unknown, which controlled the hæmorrhage.

Seen eight hours later by Dr. Fox, June 5, 1892. Patient very anæmic and collapsed; vaginal examination revealed vagina and uterus filled with a "grape like" substance; cervix soft, dilatable; fingers easily introduced into uterus. Dr. Fox "curetted the uterus with his index finger" removing in all enough of the mole to fill a "high black silk hat." Intra-uterine douche of mercuric bichloride 1-2000 solution given, followed by hot water; uterus kneaded; patient's

general condition treated; made good recovery. Specimen examined microscopically gave no evidence of foetal tissue, other than the cystic degeneration of chorionic villi. The following May she aborted at three and a half months. No evidence of previous trouble.

Dr. Fox emphasizes the difficulty of diagnosis and considers the introduction of the finger into the uterine cavity essential to certainty.

DISCUSSION.

Dr. CHARLES P. NOBLE. I have met with one case which I shall report as the condition is rare. The patient was a young primipara of rather poor development. Her sexual system was imperfectly developed, which was possibly the cause of the degenerative condition. The history was similar to that which we find in the majority of cases of hydatidiform mole, namely a history of repeated hæmorrhagic discharges, rather currant-colored than bloody, with the fact that the size of the uterus did not correspond with the period of pregnancy, and that the uterus was decidedly harder than normal. In this case I made a diagnosis of dead ovum and advised abortion. I emptied the uterus and found it filled with this hydatidiform mass. The woman was supposed to be five months pregnant, and the size of the uterus corresponded to three months. In some cases the mass grows rapidly, so that the uterus instead of being smaller, is much larger. I think that a prudent man who watched his case for a little while and noticed the peculiar blood-stained discharge, and carefully palpated the uterus and noted the difference in consistency, would have a shrewd idea that it was not a normal pregnancy, and that it was a hydatidiform or some other form of mole.

Dr. HORACE FOX. I believe that the points mentioned by Dr. Noble would, to a certain extent, aid in making the diagnosis, but I adhere to my original assertion that the diagnosis will not be *certain* until the cervix is sufficiently patulous to permit the introduction of the index finger into the uterine cavity. As regards hæmorrhage, in the case reported, there was no bloody discharge from the beginning of the pregnancy up to the time of the evacuation of the mass, a period of seven months. The exclusion of the foetal heart sounds, ballotement, and the vaginal examination, combined with careful palpation, would aid in arriving at the correct diagnosis.

ITEMS OF INTEREST.

Post-Partum Ovariectomy.—Dr. Aust. Lawrence read a paper with this title before the Obstetric Section of the British Medical Association (*Med. Rec.*). He narrated ten cases on which he had operated; in all peritonitis had followed the labor, and the patients were supposed to have puerperal fever, the presence of the cyst not having been suspected during pregnancy. He drew the conclusion that when an ovarian cyst was discovered in the abdomen of a pregnant woman it should be removed as soon as possible, there being many dangers if it were let alone, whereas, on the other hand pregnant women bore abdominal section well. Supposing the cyst were first discovered when the patients actually were in labor, he laid it down that one should endeavor to get the labor over with as little straining as possible, using forceps if admissable, and if symptoms of peritonitis appeared an operation might be performed; otherwise it would be better to wait till the puerperium was passed.

Dr. Pozzi agreed that it was a dangerous thing to have an ovarian cyst in the abdomen of a pregnant woman, the principle accident to which she was liable being the twisting of the pedicle. Sometimes, when the torsion was incomplete there was pain but no rise of temperature. He pointed out that sometimes the swelling in the abdomen was on the opposite side to that on which the cyst grew, and sometimes he had found similar symptoms caused by elongation of the pedicle, the cyst having been lifted up by the pregnant uterus, and formed adhesions high up in the abdomen upon which there was tension after the uterus emptied. The symptoms in these cases were chronic and differed from the usually acute symptoms of torsion.

Dr. Byers thought that if a cyst were discovered near the end of term it would be better to wait until after labor before interfering.

Dr. Murphy, the president, had found pregnant women bear all operations well, and thought that in every case of pregnancy it was desirable to operate when a tumor was discovered.—*St. Louis Med. and Sur. Jour.*

Dr. J. G. Kerr, of Canton, China, in a paper, entitled "Native and Foreign Medicine in China," gives an interesting account of the position of obstetrics in his China.

Every physician knows the terrible dangers to which women are

exposed in cases of difficult labor, and how often death can be warded off by methods which modern science has placed in our hands. We cannot compute the number of women and unborn children annually doomed to death in an empire of 300,000,000 of people for the want of the methods and the skill possessed by all our physicians. Dr. Mary Niles, the lady physician, in charge of the female department of the hospital in Canton, reports her obstetrical practice for 1892 as follows:

Dead before arrival of physician,	5
Forceps deliveries,	31
Requiring version,	7
Craniotomy,	7
Delivery of head left in utero, .	1
Manual assistance. . . .	5
Extraction of retained placenta,	9
Placenta prævia,	1
Sundry cases,	38

Altogether one hundred and four cases, in five of which mother and child were both dead before the foreign physician was called, and more than fifty of the remainder required operative interference. The instance in which the body was torn away by the native midwife, and the head left in the uterus (a like case occurred to me some years ago), shows how utterly helpless they are in the presence of difficulty; and to what barbarous treatment the midwives in their ignorance and desperation resort. Multiply these figures of one year for one city, by the hundreds of cities and thousands of villages, and you get a glimpse of the sufferings which fall to the lot of women in an empire which is without the blessings conferred by rational medicine and surgery. Then multiply the thousands who suffer and die in one year by the years of a century and the result shows by contrast what an inconceivable amount of good is conferred on the human race by science and skill of the medical profession of to-day. This simple computation will also give some idea of the humane and philanthropic work in which medical missionaries are engaged, even if you leave out of the count the vast good done by them in removing prejudice and conciliating the people, thus opening the way for the herald of the gospel.—*Cincinnati Lancet-Clinic.*

VOL. III.

DECEMBER, 1893.

No. 12.

THE
New York Journal
OF
GYNÆCOLOGY
—AND—
OBSTETRICS

ISSUED MONTHLY.

A. H. BUCKMASTER, M. D., J. D. EMMET, M. D.,
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THE OFFICIAL ORGAN OF THE NEW YORK OBSTETRICAL SOCIETY.

BAILEY & FAIRCHILD,

29 Park Row, New York.

LONDON : H. K. LEWIS, 136 Gower Street, W. C.

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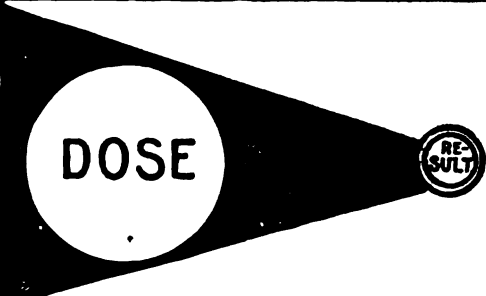
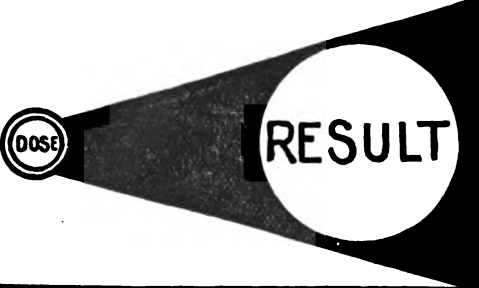
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PUBLISHED BY
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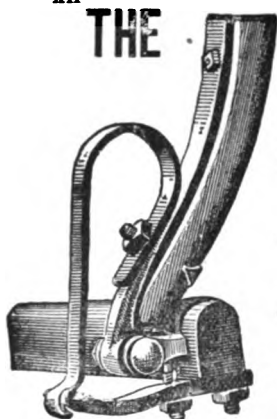
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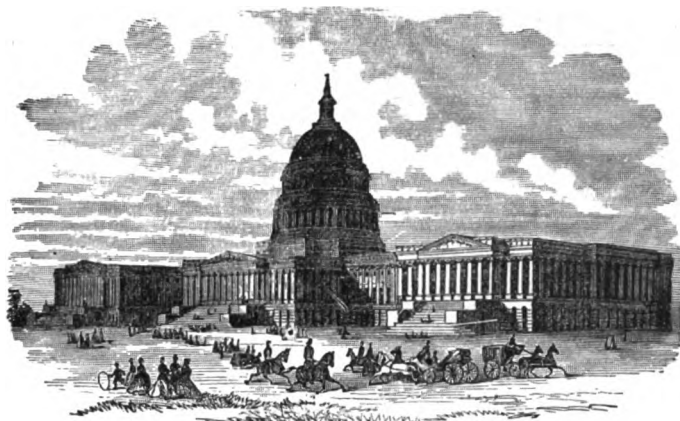
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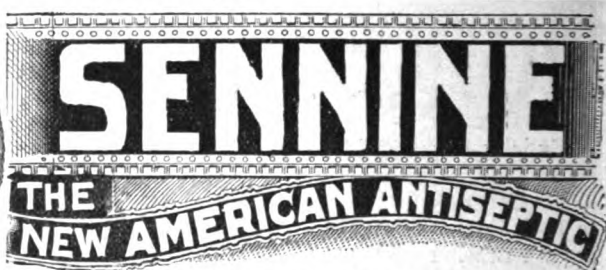
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